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An Open Market For Wool

Address by J. E. COSGRIFF, President Continental National Bank, Salt Lake City, Utah

MR. PRESIDENT, ladies and gentlemen: Our Salt Lake Clearing House asked me to represent them in an address to your convention. I presume an appropriate subject would be "A Bankers' Clearing House," but a far more interesting subject and one of more practical value would be the subject of "A Clearing House for Wool—AN OPEN MARKET."

The chief function of a bankers' clearing house is the gathering of checks each day at a convenient central point, running them through a dodge gate, and then distributing them to the banks upon which they are drawn. When these checks are distributed and it happens that some of them are not branded, of course no one claims them, just as when sheep are found on the range not branded, no one claims them.

Many years ago I happened to be near Rock Springs, Wyoming. Some of you may know this place. It is a town where a number of wealthy banker-sheepmen used to live. At the time referred to there were quite a number of sheepmen engaged in separating a lot of sheep that had become mixed in a storm. After they had finished the work I noticed about a dozen sheep in a pen near the dodge gate without any brand on them. I was not acquainted with these sheepmen, so I assumed the role of a tenderfoot and said to one, "What are you going to do with those sheep, that are not branded?" He replied, "Why, we are going to give those to the church."

Afterwards I heard that the Church of the Good Shepherd got them.

Some two or three years ago I was motoring through California and I met a young man who had been in the banking business in New England and who had come to California to engage in the sheep business. The

broken down in the banking business and he came to California for a change and a rest. "But," he continued, "I find when I ship my wool that the railroads get the change and the wool dealers take the rest."

A few years later I happened to be in Blackfoot, Idaho. Blackfoot has wide streets, particularly where the railroad goes through and I saw a large herd of sheep in one of the streets, nearly covered with paint brand. A small boy stood on the sidewalk who looked as if he might be a sheepman's son, and I said to him: "Why do they use such a large brand on those sheep—is it to keep the sheepmen from stealing them?" He replied with indignation, "No, the sheepmen wouldn't steal them, that's to keep the cattlemen from stealing them."

Today we are face to face with a condition which we have not had for many years. We are without a tariff on wool. During the Cleveland administration I heard a novel plan for restoring the tariff on wool which might be worthy of consideration at this time. During one winter of that administration I was moving five camps in the locality known as the Red Desert, in Wyoming.

One night when a blizzard was on and the mercury was 30 below zero, the sheep left the bed ground just as we had our supper ready. The herder and myself while endeavoring to hold them, became separated from the wagon, and we drifted with the sheep all night. No one except a sheepman who has



Cloth Showing the Damage Done by Jute and Sisal Fibers in the Wool.

usual course of retrogression for a sheepman is into the banking business, but in this instance the usual order had been reversed, and this man had gone from the banking business into the sheep business. I expressed surprise at this and asked how it had happened. He said that his health had

stayed with a bunch of sheep all night in a blizzard, knows what a long winter night is. It seemed as if morning never would come. We could not make a fire, had nothing to eat, and and to have gone to sleep would have meant death. Toward morning the herder moved near me and said: "I wish I had Grover Cleveland out here tonight." In answer to my question as to what he would do, he replied, "I would set him to herding these sheep and by morning he would put a tariff on wool!"

The dream of the sheepmen for years has been an open market for wool—a place like the auction sales in London—where it would find a ready sale and true market value. Many preliminary attempts have been made in the past to establish such a market in this country. They have all been failures in so far as the ultimate object is concerned, and they will always be failures until we recognize the fundamental principle that a product to be readily sold in an open market must be standardized, reliable and ready for use. We cannot establish an open market or other satisfactory methods of selling wool until we have prepared it for use at its source—the shearing sheds—the same as many other great products are prepared for use at their source. The Australians have devised, improved, and perfected a system of standardizing their wool and this system is now being adopted in almost every wool growing country in the world except our own United States.

It might be of advantage to us at this time to briefly compare, or rather contrast the Australian system with our own American system, or more properly speaking, lack of system.

Wool is shorn, classed, baled and branded at the shearing sheds in Australia, by contract. The wool grower brings his sheep to the shearing sheds, where they are taken charge of by a contractor who does all the work at a specified price. The owner does not handle the wool and is relieved of all the care and worry incident to shearing. There is perfect organization and

the work runs as smoothly as a regulated watch. When the wool is out of the hands of the contractor, it is ready for use by the mill, reliably graded,—in short, **standardized**. The contractor has no object other than to maintain an unvarying standard. It means his reputation and his livelihood. He is necessarily impartial as between the grower and the buyer, and accordingly is able to maintain the standard.

Now let us look at American methods. We allow a gang of irresponsible sheep shearers to shear our sheep, and when they are through the sheep usually have the appearance of a field newly plowed with deep furrows. Often they are covered with cuts and blood. The condition is so deplorable that humane societies are taking steps to prevent it. The sole desire of a shearer seems to be to get rid of the sheep and wool as quickly as possible. The fleece is kicked together, tags and all, and a fibrous twine is wrapped about it. It is then taken by an irresponsible sacker and tramped with heavy boots into a wool sack. Never afterwards can those fleeces be perfectly separated. Never afterwards can the wool be sold while in those sacks in any other than a speculative way. There is no organization, no supervision, no standard, no system.

In London, wool is sold at a commission of 1 per cent as a maximum and at a lower rate for more than 500 bales. In Australia wool is sold by the brokers at $1\frac{1}{4}$ per cent as a maximum and a lower rate for a large quantity.

I have before me the Account Sales of a clip of Wyoming wool of 250,000 pounds sold in Philadelphia last September at a price of 13c per pound. It was sold in the original bags. The dealer did not grade it; he never handled it, so far as I know, except to send out sample bags, and his selling charge was $1\frac{1}{4}$ c per pound, or approximately 10 per cent of the gross proceeds. Just think of it, sheepmen! It cost ten times the commission charged for selling wool in London. How long must this antiquated and

indefensible system endure? The railroads charged approximately 10 per cent more for hauling the wool to market. Under the Australian system of classing (or grading) and baling wool at the shearing pens we would save in Utah approximately $\frac{3}{4}$ c per pound in the freight rate alone.

The greater part of our wool is sold to the manufacturers in graded lots. It is graded by the wool dealer and is a tedious process. It takes weeks, and sometimes months to grade it and put it in a condition for sale. The warehouses are cold, often poorly lighted, the room limited, and the work necessarily slow. The grader, working in the interest of the seller, crowds the grade—includes as much inferior wool as he thinks will be accepted. Sometimes the wool is so unsatisfactory to the dealer himself that he has it regraded. In any event when the wool is sold to a manufacturer he sends a representative to receive it, who usually handles every fleece and arbitrarily rejects all fleeces that do not suit his fancy. There is no impartial authority to stand between seller and buyer and say whether or not the grade as prepared is of the class for which the manufacturer contracted.

I know a dealer in Philadelphia who sold 100,000 pounds of graded wool and when the manufacturer sent his representative to receive it he rejected 25 per cent of the first 50,000 pounds. The dealer was justly incensed, so he graded the rejections and put more than half of them into the remainder of the original pile of 100,000 pounds. Now a few days later when the same representative handled the remaining 50,000 pounds purchased, he rejected only 15 per cent of that lot.

It really seems incomprehensible that the wool growers of this country have endured such an exasperating system so long. By the time our wool has reached the mill in graded lots the fleeces have been handled from three to six times, they have lost their identity, and are practically reduced to broken locks. A fleece of wool never looks so well as when freshly shorn, and every handling detracts from its

appearance. Consider the expense of handling this wool several times, then the amount of storage space required over that for baled wool and the exasperating delays in preparing it for sale and delivery, when all of the work could have been done with one handling at the shearing pens. The dealer must necessarily exact a heavy toll to cover the expense of all this unnecessary work. Then too, the expenses of the persuasive barnacles who come to the West each spring to solicit consignments, to examine or purchase our wool in its unmerchantable shape must be ultimately borne by the sheepmen. Nearly all of this could be avoided if wool were prepared for the mill at the source of supply.

When a progressive foreign government desires to introduce a successful system of some other land it usually employs experts to do it, and the government bears the expense of the undertaking. The Australian government has recently employed two experts from the United States for the purpose of introducing the American system of handling grain in bulk. The American manufacturer has not relied entirely upon the tariff for his protection. He has imported the best foreign machinery and the most skilled workmen to instruct the American operatives, and in salesmanship and advertising the American manufacturer has far excelled the European. The Americans are quick to take up a new idea and to improve it, and the time is at hand when our obsolete methods of preparing wool for market must be displaced by the well developed and successful Australian system.

Four years ago the Canadian government engaged an expert to report on the Canadian wool growing conditions. His name is W. T. Ritch. He has had thirty-six years' experience in every branch of the industry, from the breeding of sheep to the manufacture of wool into cloth. He spent fifteen years in the Australian wool trade. He has visited and investigated wool-growing in India, South America, South Africa, Australia, and New Zealand. While engaged by the Canadian

government he visited Oregon, Idaho, Montana, Wyoming and Utah, to investigate western wool-growing conditions. When he finished his work with the Canadian government he rendered his report to the Minister of Agriculture. An official of the Canadian government has given testimony in regard to his mastery of the whole subject of wool growing. When in Bradford, England, a year ago last June, I investigated his work and found it spoken of in the highest terms. When he had finished his work with the Canadian government, he returned to Australia, there to learn by actual work the latest Australian methods. He possesses that inner knowledge of the business which can be obtained only by actually working at it.

It is evident to me that if foreign governments find it advantageous to employ experts to introduce new and successful systems, we should engage such an expert, and I have engaged Mr. Ritch to come to America to instruct us and ultimately to introduce the Australian system. I have personally agreed to pay his salary and expenses for at least one year. I have not sought or received the assistance of the National Wool Warehouse & Storage Co., nor any association, nor any individual, save Mr. T. W. Boyer, for whose encouragement and support I am indebted. Mr. Ritch will arrive in this country in March, to introduce this system, not in a private way, but in a public way. I know it will be a difficult task. I know it will require a persistent and determined effort, but I hope to have your good will and your cordial support and co-operation in this work. Without it we cannot succeed.

Mr. Ritch is now gathering in Australia all the material necessary for the introduction of this system. He has found, and will have ready to come to this country when required, skilled operatives, men not only capable of installing the new system, but of teaching it to others. We shall not attempt to reform the present antiquated system. We are going to the root of the evil, build a new foundation, and on

that foundation we will some day have a superstructure of better sheep, better wool, and better mutton.

This work should not devolve upon an individual to perform. The United States government should establish and pay for it; but are we safe in waiting for the assistance of a government which at one fell stroke sheared us of every vestige of the tariff and left us shivering in the blasts from Australia and South America? The American government has said in effect to the foreign wool grower: "We will abolish the tariff; we will construct a Panama canal and give you cheap transportation; we will leave our own sheepmen distressed and discouraged; we will open our markets to you; we will bid you welcome, and thereby we will reduce the cost of living to the American people."

And progressive foreign governments have said in effect to their wool growers: "We will build shearing pens for you at our expense; we will bring the best experts in all the world to instruct and aid you; we will improve and standardize your product; we will take advantage of the friendship of the American government and its indifference to its own wool growers; we will send your well bred and reliably packed wool into the American markets; in short, we will exchange your product for good hard American coin, and thereby we will reduce the cost of living to OUR PEOPLE!"

In this work I hope to receive the co-operation of the National Wool Warehouse & Storage Co. Without its assistance and the splendid educational work it has done it would be impossible to introduce the new system, and it will be an indispensable aid to us in firmly establishing the new order. I know that certain interests will bitterly oppose the introduction of this system and will attempt to thwart its establishment. Remember that the man who says it will not succeed is the man who does not want it to succeed. The same interests have announced from time to time that the Warehouse Company movement was declining and was no longer entitled

to your support. The National Wool Warehouse & Storage company has done a wonderful work in arousing the sheepmen, and some day we will look back to it as the turning point in our industry. It is entitled to our unwavering support. I know it has made calls upon us in the past for our time, our energy, and our money, but what great reform was ever effected without courage, without loyalty and without sacrifice?

The adoption of the Australian system will enable us to establish an open market for wool. It will reduce the cost of handling and the cost of transportation. It will enable us to send our product abroad and into the markets of the world, because you know free trade works two ways. It will teach us and encourage us to improve our sheep, our wool, and our mutton. It will elevate our industry to the plane of other great agricultural industries. The present time seems an opportune one for a final and successful effort.

WOOL COUNTS.

When you read the London Woolletter in this paper each month, you frequently see wool referred to as 46s, 50s 64s and so forth, in fact all foreign wool literature is couched in these terms. The United States is the only country that grades wool as $\frac{1}{2}$, $\frac{3}{8}$, $\frac{1}{4}$ blood, etc. In place of such terms the foreigner uses figures to indicate the fineness of the wool. The finer the wool the higher the number that is given it. These numbers are supposed to indicate the number of yards of yarn per pound that a certain quality of wool will spin. Yarn is bought and sold by the pound according to the fineness of the thread. Yarn number 1 is the coarsest and is supposed to contain a thread 560 yards long to each pound. Yarn number 2 is not so coarse and contains twice 560 yards of thread to each pound or 1,120 yards. Yarn number 60 would contain 60 times 560 yards of thread to each pound. And so on, each yarn number representing the number of times 560 yards that it contains.

Now it is from these yarn numbers that wool gets its number. A wool that will spin a yarn of 50s fineness is de-

signed a 50s wool. Of course the fineness and strength of fiber determines the number of the yarn that a certain wool will produce. Wool is not always spun into as fine a yarn as it might be but long experience has enabled the wool handler to tell from a piece of wool just about how fine a yarn it would produce. It is possible, however, to convert our somewhat cumbersome wool terms into the more accurate terms used in foreign markets. Our braid wools, would in London, be numbered as from 30s to 38s. Our quarter bloods from 40s to 49s; our three-eighth bloods from 50s to 56s; our one-half bloods from 58s to 60s, our Merinos from 60s on up, depending on their fineness. Now of course all the numbers between 40s and 49s are not used or between any of the designations here given but our wool would fall in the classes here given. Our fine Territory Merinos would average about 64s and that is about the average of the Merino wool grown in other parts of the world including Australia. We produce a considerable amount of wool that grades as high as 70s and a small amount that runs as high as 80s. Australia produces a large amount that runs from 70s to 80s and a small amount that grades up even to 100s. There is not much demand for wool, however, finer than 90s. The price of these scoured wools depends on their fineness. Let us look at the Boston market. Today a Sydneys 80s is quoted in Boston top price at 67 cents per scoured pound, a 70s at 63 cents; a 64s at 59 cents; a 60s at 54 cents.

As we have before explained, a wool that will spin into 64s yarn is designated a 64s wool no matter how much of it may be required to make the pound of yarn. It is interesting to learn how long a thread a certain fine wool will produce. Take a 70s yarn, this means that such a yarn contains a thread seventy times 560 yards long or 39,200 yards, equal to twenty-two and one-fourth miles. How much grease wool would it take to make this pound of yarn? The amount varies somewhat depending on the shrinkage but probably three and one-half pounds would be sufficient. Then each pound of grease wool would spin into a thread

about seven miles long. If we estimate the average fineness of all American wool to be about 60s and that we produce 132,000,000 pounds of scoured wool then this would spin into a thread 2,142,000,000 miles long or sufficient to circle the earth 85,680 times.

CONDITIONS IN SWEET GRASS COUNTY, MONTANA.

To The National Wool Grower.

The sheep in this section are in good condition, much better than a year ago at this time. The winter has been a remarkably mild one and the conditions of the wool clip is very good; better than I have seen it in several years. The wool is not only well grown, but very clean. We have had no cold high winds to speak of this winter and this fact has been very favorable to sheep and accounts very much for the good conditions of both sheep and wool.

The range at present is in good condition and sheep are doing better than they did earlier in the season when we did not have quite enough snow for them to do best.

The wool clip of Montana this season will fall short several million pounds; a great many sheep were shipped out last summer, and a large number have been hay-fed this winter, wherever there was plenty of alfalfa hay. Some of these hay-fed sheep and lambs are commencing to move to market. When the number of sheep shipped out last summer, and the number being fed this winter for market are summed up, it looks as if the Montana clip would be many million pounds short. It is getting to be a ewe and lamb proposition here in Montana. We cannot run wethers until they are three and four years old any more, not with wool on the free list and range conditions as they are now, where you must lease a good deal of range to run on.

It is my candid belief that the Montana clip this year, what there is of it, will be of excellent quality in every way and one of the best ever produced in the state of Montana.

ROBERT G. MILNE,
Montana.

Wool Growing In Australia

"WOOL OR MUTTON" (By R. H. HARROWELL)

THERE is such a thing as a good wool and mutton sheep, that is a sheep which combines a good payable class of wool with a fairly well fleshed and fairly quickly maturing carcass, but it does not necessarily follow that it will pay every farmer to go in for this particular type. Everything depends upon class of country in determining the aims of sheep breeding because, instead of going in for a generally useful sheep, it may pay an owner better to specialize either in wool or in mutton.

It is rather difficult to lay down hard or fast rules as a guide for those

be considered, as will be referred to later on. Splitting the subject in half, however, we will first deal with the subject of specializing in wool.

The country is of first importance in wool production, because it has a very great influence on the quality and character of wool. It is a common thing in Australia to see one man producing a very beautiful quality of wool, while a few miles away another man, breeding on exactly the same lines, produces quite a different quality. Wool is particularly sensitive to locality, and all the breeding skill in the world would not make the quality

rainfall and on light carrying country which, however, must be healthy and carry sweet pasture. Heavy rich soil puts too much condition in the wool and would, in the majority of cases, be used with more profit for putting fat into mutton sheep. The Merino likes to travel as it feeds, therefore it is a breed most suited to large areas where pastures have not the thick sole of grass found on cultivated lands.

Speaking in the broadest sense there are two types of Merinos that may be considered. Australian experience has proved that the wrinkly bodied, small narrow-framed Merino has no place at



A Profitable Type of Australian Merino.

farmers who are undecided in regard to which branch of sheep husbandry to take up, but there are several factors which in every country aid in coming to a decision. For instance, an area where cultivated pastures and cultivated crops are not possible, it invariably pays to specialize in wool rather than in the general purpose sheep or the purely mutton sheep and especially where the pastures are long distances from railways and markets does it pay to specialize in wool. And the proximity or otherwise to freezing works is also a factor which must

of wool other than what local conditions permitted.

One need not look far for the breed of sheep par excellence for wool production, it is without question the Merino, but, what does require very careful consideration, is the type of Merino to go in for. In coming to a decision ones locality and country must be taken into consideration, because wool is principally influenced by the soil. The best qualities of Merino wool are not produced under heavy rainfall condition or on rich heavy soils. They are grown under light

all in the wool producing industry. The two types that have to be considered are the big bold, plain bodied, robust wooled sheep suited to hot open country of not very high altitude, or the smaller framed, shorter stapled, very high quality sheep suited to higher altitudes, and to colder and heavier rainfall conditions. It must be distinctly understood that there are localities where one of these breeds would pay far better than the other. Take a case in point. There are flocks on the high table land of the New England district of New South Wales,

which are famous for their magnificent wool which always figures among the top prices. It would be foolish for the owners of this type of Merino to discard it and go in for the type suited to the lower hotter country, while on the other hand, it would be equally foolish if the sheepman on the low hot country abandoned his more robust type for the lighter quality sheep of New England. There are men in Australia who have succeeded at wool growing better than others, chiefly because they have been quicker to see the type of Merino which best suits their country. It is better for a man to take advantage of local conditions and go with them rather than fight against them.

After all is said and done the wool growing business must be considered on the per acre basis, not on the price per pound realized by the wool. There are conditions under which the attempt to produce the high quality fine wool which would surely figure among the top prices, would not give the return per acre that a lower quality carried by a more robust type of sheep would. This is a point which should be thoroughly grasped, because a man can easily reduce his annual wool check by trying to get amongst the top prices if his country is not suitable for the production of that class of wool.

Though the Merino is principally a wool-producing sheep, there is no reason why he should not have a good carcass. You cannot convert him all into wool, and there arises the necessity for disposing of such surplus stock as wethers, old ewes and culled sheep, and they can only be sold as stores or fats. But under either heading the frame or carcass is a matter of great consideration when figuring the price. Apart from this, frame is the main indication of constitution, it is the foundation upon which the wool superstructure rests and it should have the main consideration. It is impossible to find well sprung ribs, straight backs, wide chests and quarters among the very wrinkly Merinos, therefore, that class of sheep should be rigidly avoided. A few good neck folds are not

undesirable, but the body should be smooth from behind the shoulder. What would be almost unmaterial defects in individual sheep assume immense importance when considered in the aggregate, and it is by paying attention to these fine points that a grower can get around him a highly profitable wool-bearing flock.

The ewes represent the main body of any flock, so it will be advisable to first of all consider the ewes. They should be selected in the first place for their frames, because improvement in fleece can be obtained by the judicious selection of sires. The ewes should have well sprung ribs and should be wide across the shoulders and the rump. They should have plenty of room between the hocks, sickle hocks should be strenuously avoided whenever possible. The back should be level and there should be no drop behind the shoulder because that is the forerunner of the great curse, the devils grip. The head should be well carried and covered almost to the eyes, but from the eyes downwards the face should be absolutely free from wool. There should be no fold or jowl around the face, and the mouth should be correctly formed and the teeth sound. Given the above mentioned good points, the ewe is physically fitted to do justice to herself. The clear free face, free, from wool prevents eye trouble and by giving good vision enables the ewe to hustle for her living. The frame is suited to resist hardship and carry a good sized lamb and when the lamb appears the absence of body wrinkles enable the ewe to suckle it without artificial aid, and the type above described is the best milker. The plan bodied ewes also carry greater length of staple, and greater evenness in fleece. There are no perfect sheep in the world, so that the breeder has always a life's work ahead in endeavoring to improve his ewes, which task lies in the direction of improving the quality of the fleece, putting the same quality more evenly over the sheep and judiciously increasing the weight of wool. But it should be distinctly borne in mind that this prog-

ress must not be attained at the expense of one of the above mentioned attributes of a good type of ewe.

RELATIVE WOOL SHRINKAGES.

Our average woolgrower has come to realize that as a rule our territory wools shrink more in scouring than similar grades of wool raised in either Australasia or South America. Of course the extremely light shrinkage of imported wools need not be taken into consideration for a part of this lightness is due to the skirting and to the fact that only the lightest wools are selected. However, aside from the skirting it cannot be gainsaid that foreign wools as they come from the sheep are lighter than ours, most particularly is this true of fine Merino wools.

From various sources we have gathered what we believe to be the average shrinkage of domestic and foreign wools and include them in the following table:

Grade	Shrink.
Western fine staple	67.00
Australian fine	54.00
South Africa fine	58.00
Territory ½ blood	62.00
South American	54.00
Australian	47.00
Territory ¾ blood	57.00
South American	50.00
Australasian	42.00
Territory ¼ blood	50.00
South American	38.00
Australasian	38.00

Of course every practical sheepman will understand that these shrinkages must not be taken literally; that they are influenced by season and section. This comparison of foreign and domestic fleeces show a pronouncedly lighter fleece abroad than is produced in this country. It is worth while to attempt to discover the cause of this.

The elements that determine the shrinkage of wool so far as the sheepmen are concerned is the presence of grease and oil as well as dirt and foreign matter. The relative proportion of these substances that will be found in a fleece depend upon the district,

season and type of sheep from which the fleece is derived. Our fine Merino wools contain more grease by quite a per cent than do similar Australian wools. This is of course due to the strain of Merinos that we have been breeding, not so much those we are using now as those we have used in the past. I have before me the scouring results obtained from fleeces of very fine Australian show rams. These rams had won prizes in the shows and were then hand shorn under the auspices of the show officials, and the wool scoured. Under such conditions we may rely upon the results. A rather wrinkley ram where you would naturally expect a very oily fleece shrank twenty-seven and two-thirds pounds of wool of one year's growth. When this wool was scoured it shrank 51 per cent. A show ewe shrank 23¾ pounds of wool that shrank 52 per cent. The grease weight of both of these fleeces is certainly heavy, but the scoured weight is simply enormous when we compare it with the scoured yield of many of our ram's fleeces. Now take the case of our Merino rams that would shear twenty-seven and two-thirds pounds of grease wool and lots of them do it. We would be surprised to find the wool shrinking less than 68 per cent, and in most cases it would be higher. This twenty-seven and two-thirds pound Australian fleece produced 13¾ pounds of clean wool, but a fleece of the same weight in this country would not probably produce more than 8¾ pounds of clean wool, and before a fleece shrinking 70 per cent could produce 13½ pounds of scoured wool, it would have to weigh 45 pounds in the grease. I am told, however, that many Australian rams shear from 13 to 14 pounds of scoured wool each year from fleeces that weigh in the grease 27 to 32 pounds. It is certainly more desirable to have a ram carry 30 pounds of wool that will shrink 50 per cent than to have him carry 50 pounds of wool shrinking 70 per cent, which would give the same yield of clean wool. Many of our stud flocks have increased the weight of their fleece in recent years which in-

crease has too often consisted of grease instead of wool. I think, however, our breeders have seen the evil of this and are working in the opposite direction now. Many of the best Australian breeders have made an attempt to eliminate as much oil as possible and at the same time increase the percentage of clean wool. These breeders have about reached the conclusion that 30 pounds of wool is about the limit that a stud ram should be asked to carry and we think this is correct. Of course some oil is essential to preserve the quality and character of the fleece, but if our rams fleeces shrank 55 per cent they would still have ample oil to satisfy all the needs of the wool fiber. The heavy shrinkage of our wool we think is partly due to the excess of grease that it carries.

Aside from the grease other factors tend to make our wool heavier than that of foreign countries. Foreign wools do not contain as much sand and dust as our wools. This is apparent to anyone who has ever examined any Australian wool. Several reasons exist for this. The most important one, however, is the fact that Australian sheep are not herded, while all western sheep are now and always must be herded. The Australian sheep running in its pasture stirs up no dust to settle in the fleece. Only a few sheep are in the same section at the same time so that the sod is seldom disturbed. The whole pasture is a bed ground so that no one place is used by the sheep on more than one occasion. In this country our flocks must be herded and herding is a fruitful source of sand and dust in the wool. The continued use of the same bed ground and the same trail soon develops a bed of dust that rises every time it is used and a part of which always settles in the wool. We cannot run our sheep in pastures, but loose herding and a constant change of bed grounds and the avoidance of dusty trails will do much to lighten our wool. Then our methods of shearing at large central plants increases wool shrinkage. We have seen sheep driven for miles to get to some big shearing

plant around which there was sand and dust several inches deep. A few hours in such surrounding serves to fill an otherwise clean fleece with foreign matter. Not only does such dirt increase the shrinkage of the wool but it may actually injure the texture of the fibre and thus make it worthless. Alkali dust is particularly detrimental to wool.

The average western sheep produces about 7½ pounds of wool, shrinking about 66 per cent. Such a fleece therefore, contains 2.55 pounds of clean wool and 4.95 pounds of dirt and grease. Suppose one pound of this dirt and grease could be eliminated leaving the fleece to weigh 6½ pounds. Such wool would then shrink 60.5 per cent but would yield just as much clean wool as it did when it weighed 7½ pounds. Would this mean a saving to the wool grower? Yes, a decided saving. Six more fleeces of wool could be put into each sack, thus reducing the cost of sacks. The freight for hauling the wool to the railroad would likewise be less. On each fleece 1¾ cents could be saved in railroad freight, 1½ cents in commission charges would be saved and 1½ cents would be saved on each fleece in the costs of scouring the wool. All of these charges are paid by the woolgrower either directly or indirectly. Thus by eliminating one pound of dirt from our wool the income of the woolgrower would be increased practically five cents per sheep or almost enough to pay the taxes. The wool would in addition be better.

A LETTER FROM OREGON.

To The National Wool Grower.

"I am receiving the National Wool Grower regularly and I take more pleasure in reading it than any other paper or magazine that comes to our house.

"We have enjoyed a fine winter in eastern Oregon and western Idaho. Our sheep are showing the best fleeces I have ever seen at this season, and I have been in the sheep business many years."

WOOL PRODUCT OF THE UNITED STATES.—1913.—BULLETIN OF NATIONAL WOOL MANUFACTURERS.

States and Territories.	Quality	National Association's Estimate, Number of Sheep of Shearing Age, April 1, 1913.	Average Weight of Fleece, 1913.	Wool Washed and Unwashed, 1913.	Percent of Shrinkage, 1913.	Equivalent Quantity of Scoured Wool, 1913.	Average Value per Scour- ed Pound Oct. 1.		Total Value, 1913.	States and Territories
							1912.	1913.		
Maine.....	10% fine, 90% medium.....	150,000	6.25	937,500	42	543,750	51	39	\$212,063	Maine.
New Hampshire.....	25% fine, 75% medium.....	35,000	6.50	214,500	48	111,540	53	40	44,616	New Hampshire.
Vermont.....	20% fine, 80% medium.....	38,000	6.75	273,750	50	286,875	54	40	114,750	Vermont.
Massachusetts.....	Medium.....	23,000	6.25	143,750	42	83,375	52	37	30,849	Massachusetts.
Rhode Island.....	".....	5,000	6.00	30,000	42	17,400	52	37	6,438	Rhode Island.
Connecticut.....	".....	15,000	5.70	85,500	42	49,572	53	37	18,348	Connecticut.
New York.....	30% fine, 70% medium.....	550,000	6.50	3,575,000	47	1,894,750	52	40	757,900	New York.
New Jersey.....	Medium.....	17,000	5.40	91,800	46	49,572	52	38	18,837	New Jersey.
Pennsylvania.....	60% fine, 40% medium.....	648,000	6.50	4,212,000	48	2,190,240	54	44	963,706	Pennsylvania.
Delaware.....	Medium.....	5,000	5.30	26,500	44	14,840	53	36	5,342	Delaware.
Maryland.....	".....	128,000	5.50	704,000	44	394,240	53	36	141,926	Maryland.
West Virginia.....	75% fine, 25% medium.....	775,000	5.50	3,162,500	48	1,644,500	56	46	756,470	West Virginia.
Kentucky.....	Medium.....	2,300,000	4.60	3,565,000	37	2,245,950	53	38	853,461	Kentucky.
Ohio.....	65% fine, 35% medium.....	1,200,000	6.50	14,950,000	50	7,475,000	54	48	3,588,000	Ohio.
Michigan.....	25% " 75% ".....	800,000	7.00	5,400,000	49	4,284,000	52	41	1,756,440	Michigan.
Indiana.....	15% " 85% ".....	650,000	6.50	4,225,000	46	2,808,000	52	40	1,123,200	Indiana.
Illinois.....	25% " 75% ".....	640,000	6.70	4,288,000	45	2,358,400	51	40	896,700	Illinois.
Wisconsin.....	20% " 80% ".....	440,000	6.75	2,970,000	48	1,544,400	50	37	571,428	Wisconsin.
Minnesota.....	30% " 70% ".....	820,000	6.75	7,087,500	48	2,878,200	54	40	1,151,280	Minnesota.
Iowa.....	15% " 85% ".....	1,050,000	6.51	71,727,300	48	37,011,997	53	38	1,481,288	Iowa.
Missouri.....	Medium.....	445,000	4.50	2,002,500	36	1,281,600	56	39	\$15,388,234	Missouri.
Virginia.....	".....	150,000	3.75	562,500	42	326,250	48	38	\$499,824	Virginia.
North Carolina.....	".....	30,000	3.60	108,000	42	62,640	50	38	123,975	North Carolina.
South Carolina.....	".....	175,000	3.50	612,500	42	355,250	53	39	23,803	South Carolina.
Georgia.....	".....	100,000	3.25	395,000	38	201,500	50	38	138,548	Georgia.
Florida.....	".....	115,000	3.25	373,750	38	231,725	50	38	76,570	Florida.
Alabama.....	".....	140,000	3.75	562,500	39	343,125	50	38	88,056	Alabama.
Mississippi.....	".....	100,000	4.10	400,000	40	240,000	49	36	130,388	Mississippi.
Louisiana.....	".....	465,000	4.20	1,953,000	42	1,132,740	53	39	115,444	Louisiana.
Arkansas.....	".....	1,870,000	3.95	7,398,750	39	4,478,630	57	46	86,400	Arkansas.
Tennessee.....	".....	210,000	6.75	1,417,500	65	496,125	57	46	441,769	Tennessee.
Kansas.....	Fine, fine med., and medium.....	260,000	6.70	1,742,000	63	644,540	57	46	\$1,724,877	Kansas.
Nebraska.....	".....	450,000	7.00	3,150,000	62	1,197,000	57	46	\$228,218	Nebraska.
South Dakota.....	".....	240,000	7.50	1,680,000	62	638,400	57	46	296,488	South Dakota.
North Dakota.....	".....	4,200,000	8.30	31,500,000	63	11,655,000	58	47	550,820	North Dakota.
Montana.....	".....	1,900,000	7.50	14,250,000	64	5,130,000	57	44	294,864	Montana.
Wyoming.....	".....	375,000	9.10	3,412,500	70	1,023,750	56	44	5,477,850	Wyoming.
Idaho.....	".....	1,950,000	8.50	16,575,000	69	5,138,250	59	49	4,075,632	Idaho.
Washington.....	".....	1,600,000	7.00	11,200,000	67	3,696,000	56	45	2,257,200	Washington.
Oregon.....	33% fall, 67% spring.....	800,000	7.25	13,775,000	66	4,683,500	54	43	440,213	Oregon.
California.....	Fine, fine med., and medium.....	1,900,000	6.75	12,750,000	67	2,394,563	56	43	2,517,743	California.
Nevada.....	".....	1,075,000	6.50	5,037,500	66	1,712,750	57	48	1,663,200	Nevada.
Utah.....	".....	2,700,000	6.50	17,550,000	65	6,142,500	56	44	930,000	Utah.
Colorado.....	".....	1,350,000	6.50	8,775,000	66	2,983,500	57	44	2,013,905	Colorado.
Arizona.....	".....	55,000	6.50	357,500	67	58,776,453	55	50	1,029,662	Arizona.
New Mexico.....	25% fall, 75% spring.....	23,440,000	7.40	173,558,250	66.4	58,776,453	55.2	43.6	822,120	New Mexico.
Texas.....	Fine, fine med., and medium.....	36,319,000	6.95	252,675,300	60	100,267,080	56	43.4	2,702,700	Texas.
Oklahoma.....	".....	296,175,300	.....	.....	.....	132,022,080	55.2	43.6	1,312,740	Oklahoma.
Totals.....	.....	.....	.....	.....	.....	.....	.....	.....	\$26,671,943	Totals.
Pulled Wool.....	.....	.....	.....	.....	.....	.....	.....	.....	\$43,785,054	Pulled Wool.
Total Product, 1913.....	.....	.....	.....	.....	.....	.....	.....	.....	\$57,582,954	Total Product, 1913.

*Average valued, unscoured.

SACKING OR BALING WOOL.

We are often asked the question why do we not bale our wool. About the only answer to this is that some of our wool is not put up so that it would pay to bale it.

When wool is baled it is pressed to a density ranging from 20 to 40 pounds per cubic foot. In the sack its density ranges from 10 pounds to 17 pounds per foot very little of it reaching the latter density. Baled wool may be made any density desired simply by regulating the press. Under the great pressure of baling it natu-

out, and unless it is sold in the original bags, each sack is opened and the wool graded into its various grades. Now wool that comes out of a sack, not having been tightly pressed, is more easily handled than wool from a bale where the pressure has been great. Sacked wool also looks somewhat better than baled wool and seems to have more life. Especially is this true in freezing weather. On account of these reasons wool dealers are opposed to baled wool that has not previously been graded.

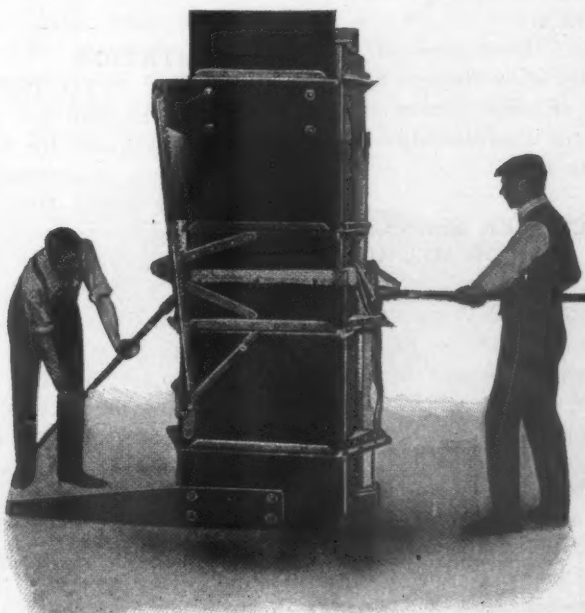
To the manufacturer these objections do not apply. He is pressed for

black wool separate, he will be in a position to bale his wool. Of course it would be better to grade the wool than the sheep, but every sheepman does not understand woolgrading, but nearly all of them can grade their sheep so that the wool will fall into the several grades. We doubt if our short clothing wool would be injured by baling put up just as it has been in the past.

Of course the grower has no interest in baling his wool unless it is going to save him money. We have no hesitation in saying that in our opinion wool that is handled properly and then



Wool Baler Open to Receive Wool.



Wool Baler Filled and Pressure Being Applied to Make the Bale.

rally follows that each fleece is driven close up against other fleeces, and unless the wool has been graded it may happen that some difficulty will be experienced in separating all the fibres into their respective grades. With baled wool if tags or dung locks have been wrapped up in the fleece the great pressure may serve to drive clean wool up tightly against them and in this way it may be stained more than would be the case in sacks. Under the existing methods of marketing most of our wool goes to the dealers where it is stored in warehouses indefinitely. Later this wool is taken

warehouse space and baled wool takes up about half the space of sacked wool. Neither does the manufacturer care about the wool being frozen for many mills are equipped with steam rooms where the wool is placed before handling. Most manufacturers seem to think that western wool should be baled and some of them don't make any bones about saying so.

After looking into the matter it seems to us that if the grower will grade his sheep before shearing; pack his tags separate; throw away the heavy dung locks which don't pay shipping expense anyway; keep his

baled will bring about quite a saving to the wool grower. From all this western country the freight rate on baled wool is from 25 to 30 cents per hundred less than on sacked wool. Baled wool does not need to be tied with twine and only requires about half the number of sacks. This would save the cost of the wool tier and the baling would take less labor than the sacking. Baled wool can be handled and stored cheaper than sacked wool and in every way is more convenient to handle. We have very little data to show the cost of baling wool, but as it dispenses with all the tramping

and does by machinery what we now do by hand it certainly must reduce the expense. Wool balers are cheap. We understand that Cooper & Nephews handles a wool baler that they sell at around \$100.00. As soon as there is any demand many different balers will be on the market.

After taking into consideration its disadvantages, together with its many advantages, we are of the opinion that fully one-half cent per pound can be saved by baling wool rather than sacking it. Of course this is with the understanding that the wool has been intelligently handled before baling, and this should be the case whether it is baled or sacked.

We hope that wool growers will give this matter some thought and in the next two or three years every pound of western wool should be baled at the shearing plant.

A MANUFACTURER SPEAKS OF METHODS.

From the Cleveland Worsted Mills, Cleveland, Ohio, we have the following. "Above all insist on having the wool tied with paper twine and if you could get the tags and black wool packed separate and sold as such the clean wool would undoubtedly sell for more money as a mill like ours would willingly pay more money for it. All of these tags, black wool and imperfect wool that we buy we have to sell again and we are not fitted for selling wool, we are fitted to sell cloth. Besides this it takes a lot of men and a lot of space packing and repacking wool that we can't use and have to sell.

In reference to the baling of wool if the freight could be minimized 30 cents per hundred we doubt very much if there is anyone who would object to receiving it in a baled condition. The same thing applies to wool from England. They usually pack it up in bales on the order of our bags only larger. This takes up a big space in the ship, and we thus have to pay more freight. Therefore during the last few years we have always ordered all of our English wool to be press packed and in this way we

make quite a saving in freight. The writer would personally like to see Idaho and Utah adopt some kind of a system whereby you could ship your wool in bales in preference to the bags as at present used."

WANTS BRED EWES.

To The National Wool Grower.

Having seen an item in the National Wool Grower saying that there were several bunches of bred ewes for sale I am writing to ask that I be advised where such ewes can be bought.

H. B. BATES,
Orient, Iowa.

AN INVITATION

TO THE WORLD.

Recently the National Wool Growers' Association sent the following letter to London to be published in the wool papers of that city.

Mrs. S. B. Hollings,
Bradford, England.

My dear Sir: On several occasions we have sent you representative fleeces of American grown wool of which you have spoken very highly. We have endeavored to send samples that would represent the average of each grade in our market. With the removal of the tariff on wool the price of our wool has naturally descended to a world's level. However, by an examination of foreign prices we are of the opinion that some of our wools are lower in price than the same wools in London. In this country we raise more wool of certain grades than can be consumed in this country for the uses that it is best adapted to. Naturally such wools fall below the London price for lack of competition.

After a careful study of the subject we are convinced that if your wool dealers and manufacturers would come to this country and look over the wool situation they would find that we have much wool that they could use to their advantage.

Much harsh criticism has been heard on your side about the character of American wool and the manner that it is prepared for market, but I feel that

most of this is unfounded and we have the statement from large manufacturers who use large quantities of the best Australian wool and also of domestic wool that grade for grade American wools have no superior in the world. These are men of large and world wide experience and their opinion should carry weight.

Every year there is a marked improvement in the methods used in preparing our wool for market. In many cases our wool is just as well handled and cared for as it is in Australia, and we feel that as a general rule in this particular our wool will compare favorably with the bulk of that to be found in the London market.

Our wools are sold largely at auction at the principal wool producing points in the west. At many of these sales several million pounds are disposed of in a day.

We want to invite users and buyers of the whole world to investigate the subject of American wool and urge them to come into our market and buy their share. On behalf of the wool producers of the United States, we can assure any foreign buyer of a square deal and equal opportunities with American buyers. To anyone who is interested in this we will be glad to furnish any information or samples of any particular wool.

Very Respectfully,
NATIONAL WOOL GROWERS'
ASSOCIATION.

A FINE HABIT TO HAVE.

To The National Wool Grower:—

After 27 continuous years in the sheep business I am practically out of it but am paying my dues out of force of habit. I am not in sympathy with the powers that be and can't understand just why wool is the first article to be placed on the free list, certainly there is no monopoly about raising it and there are but few farms or farmers that would not be benefited by having a few sheep. I am wintering a little bunch of 400 to trim up the trash along the river and furnish an occasional piece of fresh mutton.

D. W. SLAYTON, Montana.

Boston Wool Market

(From Our Boston Correspondent)

CONDITIONS in the local wool market are exceedingly difficult to understand, and both dealers and manufacturers are somewhat at sea as to the best way in which to handle the situation. One salient point stands out above everything else, and that is the real scarcity of desirable wools, either domestic or foreign. The latter have been arriving very freely during the past month, but the actual amount of wool which came on the market was not excessive. When analyzed, the figures show that a large proportion of the receipts went direct to manufacturers, while another proportion was composed of wool which had been

goods in order to retain the American trade, and mill buyers find it practically impossible to raise their buying limits unless a substantial increase is established in goods prices. Some advances from the opening figures have been tentatively made by leading mills, but this does not meet with favor from the clothiers and jobbers, and latest reports from New York indicate that sales have fallen off largely in consequence.

Opinion in the wool trade is divided, but a considerable number of the more conservative operators regard the present situation as exceedingly dangerous, both to the wool dealer and the goods manufacturer. To the

water. This is partly due to the small offerings, especially of wools suitable for America, and partly to a sharp demand for certain grades of wool from Bradford top spinners. From this side, the largest number of buyers will be in attendance seen at any sale for years. Their buying is expected to still further strengthen values, and an active and excited market seems to be assured. This cuts American manufacturers off from the possibility of getting any cheap wool from abroad for some time to come, but at the same time reduces the probability of ruinous competition from English and Continental goods makers.



A Sack of Wool Prepared by the National Wool Warehouse to Show the Impossibility of Buying Wool Intelligently, Unless it is Graded. These are Prices Prevailing in 1912

sold to arrive to other dealers. Considerable business of this nature has been done, and consumers who have been looking at the published figures of current arrivals, have been surprised to find so little wool available when they came into the market.

Weekly sales of foreign grades have been swelled by speculative buying in the trade, but manufacturers have also been buying freely anything they could use. Prices have been advanced fully two cents per scoured pound for 64s and 70s during the month, and further advances are likely to follow if London opens as strong as has been predicted. These higher values are likely to be a serious matter for the mills, as very low prices were made on

latter, the greatest danger comes from the possibility of foreign competition. Thus far the new tariff has not had so injurious effect as was feared. This is due to the abnormal conditions which have existed in England and on the Continent for the past year or two, and which are still in force. While wool sells at high prices abroad, American manufacturers will not feel the full effect of the competition, but they have no guarantee that this condition will continue for any length of time.

It seems to be conceded that the coming series in London will see an advance over the last sale of 10 to 15 per cent, with a sharp competition from buyers from both sides of the

Their hope is manifestly based on the possibility of low values continuing to prevail in this market. A part of this advantage has already been lost, owing to the unexpected shortage in domestic wools, and the consequent advance in prices, and recent contracting in the west has still further added to the difficulties of the situation. Some of the more prominent dealers, who have been among those operating freely in the west, feel assured of their position, and say that there is only a small speculative element in their contracting, but others are not so sanguine. The latter say they have been forced to operate by their neighbors, that prices are too high, and that they can not see but little prospect for

the profitable turning over of the new wools on the contract basis.

Here, as in the case of the mill men, the key of the situation is held abroad. This is one of the penalties of free wool. Prices in this country must hereafter be dominated by the world's markets, and it will no longer be possible for the American sheep grower to get high prices for his wool, except on those rare occasions when foreign markets are above normal. The present is one of those occasions. Abnormal conditions prevail at home and abroad, and the real test will not come until the world's markets settle down for the long pull sure to follow present conditions.

It will be urged that this is taking too pessimistic a view of the wool situation. Possibly, but many good men in the trade regard prices as too high the world over, and that the growers who have recently contracted their wool are the most fortunate of the three parties most concerned. High prices for domestic wool will inevitably force manufacturers to look abroad for cheap wool, and the field has by no means been exhausted. Dealers say that the orders placed for tops in Bradford by American manufacturers are much larger than has been supposed, and that every pound thus sold means not only the displacement of as much domestic wool, but also the loss of the business to the American top makers.

Local houses are rather chary about giving out particulars of their operations, but it is stated that contracting is going on all over the west wherever wool is grown. Contracts have been made, or sought to be made, in Montana, western Idaho, Wyoming, Utah, Nevada, New Mexico, Arizona, California and Oregon. Wherever buyers and growers can agree upon prices, individual clips are being tied up, the latest estimate of the aggregate being fully 20,000,000 pounds. Prices paid are fully up to last year's level, and in many cases even above. Montana growers are reported to be the stiffest, but everywhere there has been a substantial increase in asking prices from those reported at the opening.

It is probable, however, that the published figures represent the extreme outside prices, and that much wool is being secured under these figures. In fact, dealers admit as much. While protesting against contracting, the business goes merrily forward, and practically all the leading houses are operating.

Local operations in domestic wool have been on a restricted scale, especially during the past week or two. Offerings are meagre, and supplies are coming forward from the country only in dribbles. Most of the larger holdings were disposed of in January, or early in February, and none of the larger houses now have any domestic wool to sell. A late estimate gives the total domestic available in this market, including scoured and pulled, as not over 5,000,000 pounds. This is the smallest supply for years, and partially explains the attitude of the trade toward the new clip. There has been considerable speculative buying by dealers of both scoured and pulled wools, but offerings have materially shortened up, with prices above the point that would allow their profitable turning over.

Recent sales have been of a scattering nature, and mostly limited to small lots. Grease prices are little guide to the real situation, as the lots sold were hardly up to the mark, and the selling price was based entirely on the scoured content, as modified by the needs of the buyers. Scoured values are distinctly stronger than they were a month ago, the latest figures as corrected by leading factors in the trade, being as follows: Fine staple Territory, 54 to 56 cents; half blood staple, 52 to 54 cents; three-eighths blood staple, 45 to 47 cents; quarter blood staple, 41 to 43 cents; choice fine clothing, 50 to 53 cents; average fine and fine medium, 48 to 50 cents.

Scoured wools are being picked up steadily by the mills, though mostly in small lots. Choice fine wools have sold as high as 53 cents, the range for fine being 50 to 53 cents, and for fine medium 48 to 50 cents defective and stained wools sell at a wide range

at 40 to 45 cents. Pulled wools are firmly held, but offerings are not excessive, and the best lots are readily taken at full prices. Current quotations are: Fine A supers, 52 to 55 cents for eastern and 49 to 50 cents for Chicago; A supers, 48 to 49 cents for eastern and 45 to 46 cents for Chicago; B supers, 40 to 43 cents for eastern and 38 to 40 cents for Chicago; combing pulled, 47 to 48 cents for fine, 44 to 45 cents for medium and 36 to 38 cents for coarse.

Very little has recently been done in fleece wools, owing to small stocks. Two or three houses have controlled the bulk of the supply, and have been constantly advancing their limits, as expressed in recent sales. Fine washed delaine has sold as high as 27½ cents, fine unwashed delaine at 23½ cents, XX and above wool at 27 cents, and fine unwashed clothing at 22 cents. Recent small transfers of medium combing fleeces have been made at private terms, but understood to be at full prices. Current quotations on fleece wools, are as follows for Ohio: Fine washed delaine, 27 to 28 cents; fine unwashed delaine, 23½ to 24 cents; XX and above, 26½ to 27 cents; X wool, 24½ to 25½ cents; fine unwashed clothing, 21½ to 22 cents; half and three-eighths blood combing, 24 to 24½ cents; quarter blood combing, 23½ to 24 cents; half and three-eighths blood clothing, 21 to 21½ cents.

Foreign wools have been selling steadily since the first of the year, and early in February there was a broadening out of the demand to include New Zealand and other crossbreds. With the closing of primary markets in Australasia and South America, the amount of direct wool available for this country has become known. Though the aggregate is considerably larger than last year, it is still limited. Further supplies must be obtained from London sales, or must be obtained at private sales in England or on the Continent. Arrivals of foreign wool in this market have been very heavy, the total from January 1 to February 25, 1914, being 31,599,834 pounds, against 18,281,877 pounds for

the same period in 1913. For the same period, the receipts of domestic wool were 19,208,235 pounds, against 12,189,997 pounds last year. Total shipments for the same period were 45,653,447 pounds, against 36,169,261 pounds last year.

A FINE SHEARING PLANT.

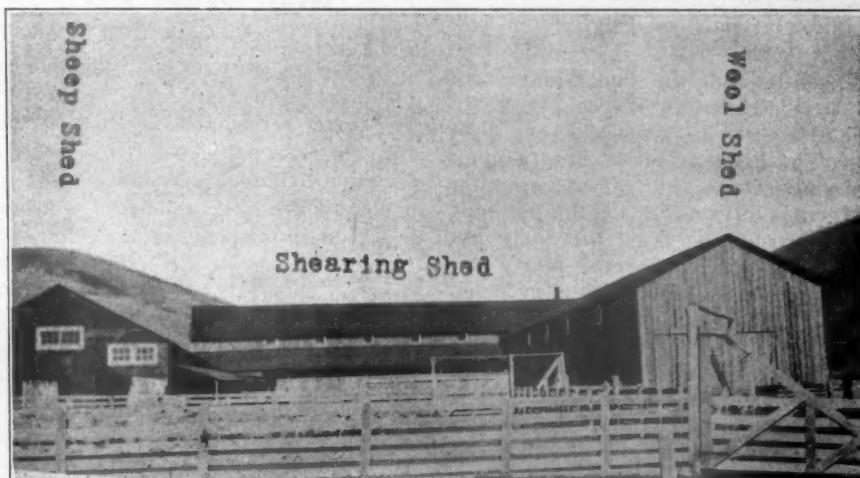
When referring to the best methods of handling wool we naturally cite some instance of how it is done in Australia as that country is supposed to be far in advance of other parts of the world in the methods it uses. We are publishing in connection with this story a photograph of the shearing plant of the Wood Livestock Company at Spencer, Idaho. This is one of the best shearing plants we have ever seen and we doubt if many in Australia excel it in any particular. As will be noticed from the picture the building consists of a main shed and two wings. The right wing is the wool shed, and has a capacity for storing something over 400,000 pounds of sacked wool. The left wing is the sheep shed and will hold under cover over 3,000 head of sheep. The main shed itself is the shearing shed and is equipped with twenty-four shearing machines. It will be noted that the floor of the shearing shed is raised about four feet from the ground. This insures keeping the floor dry and makes it very easy to keep clean. As before mentioned the sheep shed holds some 3,000 head of sheep which insures a supply of dry sheep during wet days. Nearly a day's supply can be kept ahead in this way.

When the sheep leave the shed they go up an inclined chute to reach the shearing shed. The floor of this chute is not solid, but is constructed of slats set about $\frac{3}{4}$ of an in. apart. From this chute the sheep enter the holding and catch pens, which pens are also floored with slats like the chute. The shearers stall is also equipped with this same slat floor. Therefore, from the time the sheep leaves the shed until it is shorn and turned out, it is handled entirely upon a floor constructed

of slats. This means that all the manure from the sheep, as well as all the dirt that they carry in on their feet, instead of being carried into the shearers stall, falls through these slats to the ground beneath. In the average shearing plant the sheep are kept on a solid floor, and as they are crowded and pushed along they naturally carry much dirt into the stall, and unless great care is used, some of this gains access to the fleece when it is gathered up. In this plant the floor is so constructed that all dirt falls through the floor before having a chance to contaminate the fleece. The writer looked under the slat floor of the shearers stall and examined the

the mouth of this alley next to the wool shed stands a large grading table. Here the fleeces are graded into the different grades. Most years this firm grades their wool, but some years they do not, depending on market conditions. Every fleece is tied with paper twine and the sheep are branded with Kemp's Branding Fluid. For marking purposes that are not intended to be lasting, carpenter's chalk is used. This firm is now experimenting with a mark made out of calomine, and the prospects are that it will prove satisfactory.

Adjoining the shearing shed there is a dipping vat 100 feet long. This vat was constructed of lava rock and



Wood Livestock Co., Shearing Plant

mass of stuff that had accumulated there. This consisted of sheep manure, tags containing a little wool and dust and vegetable fibres. Very few clean locks of wool were to be seen for as they are light they seldom drop through. One would be surprised at the size of the pile of trash that has accumulated under each of these stalls. In the aggregate, it would amount to several thousand pounds. Ultimately this trash will be gathered up and all tags that have any wool in them will be scoured in the dipping vat and shipped to market.

The shearing machines are arranged along each side of the shearing shed with a broad alley in the middle. At

cement. While it has been in use many years there is not a crack in it, and in this respect it is different from most concrete vats that we have seen. The dipping vat is supplied with steam pipes, and as a steam engine is used to run the shearing plant, it also furnishes heat for the dipping vat.

This shearing plant is well located at the head of a draw with well grassed hills on three sides of it. This permits the sheep to enter from many directions and thus avoid the dusty trails that lead to so many big plants.

To the writer there seems but one improvement that should be added to this plant, and that would be a wool baler. Wool that is handled, as it is

here, should in every instance be baled. As this clip is frequently sold direct to manufacturers they would sooner have it baled than sacked. The freight rate on baled wool is 15 per cent less than on sacked wool. This would amount to 28 cents per hundred. No strings would be required where the wool was baled; a saving in sacks would also be made. While we have but little data on the relative cost of sacking and baling wool, we are of the opinion that some saving in labor could also be had by baling. Wool balers are cheap, we understand costing about \$100 each.

LAST MINUTE CABLE.

Bradford, England.

Special Cable to The Commercial Bulletin, March 7.

The London sales show a much stronger tone than at the opening. Merinos have advanced ten per cent. and crossbreds from ten to twelve and one-half per cent. above the closing prices of the January sales. The United States is again purchasing heavily. American buyers seem to be favoring particularly the coarse medium crossbreds. Their purchases of merinos are but moderate. The Bradford market is stiffer. Top makers have advanced prices from a farthing to a half-penny on all qualities. Spinners are buying sparingly.

CONDITIONS FINE IN IDAHO.

Your inquiry regarding the condition of the sheep in this section to hand, I believe flocks are coming out of the winter in better shape than they have done for a number of years, and while we may have some severe storms in March, the present spell of mild weather leads us to believe that winter is practically over. The deep snows in the latter end of December drove practically all the bands to the feed grounds, before they had begun to fall off in condition, leaving a large quantity of grass on the range; this will be available as soon as the ground settles in the spring, and flocks should

hold their condition well after turning out. The wool looks extra good, and I believe will be cleaner than usual, due to the wet summer keeping the dust down well, especially during the time most of the trailing to ship was being done; then we had green feed in the fall, keeping the sheep well up in flesh. These conditions, together with the heavy winter feed, should give this locality the best wool clip we have had in years, and while the individual clips may vary in size from local causes, I believe the clip as a whole will be about average for size.

Very truly yours,
HUGH SPROAT—Idaho.

WOOL PROSPECTS.

Some wool growers have complained that they sold their wool too early. We regret very much that this is true and the National Wool Growers' Association has done everything in its power to avert the selling of wool at less than its market value. In the January number of the National Wool Grower, we gave the status of the wool market as extremely bright. We furnished the growers with the data upon which they might construct a basis of probable wool values. In the February number of the National Wool Grower we repeated in strong terms the exceedingly bright prospects for those having wool to sell. Through the pages of the National Wool Grower we have time and time again called attention to the true condition of the world's wool market, and if in the face of this information growers have sold at less than market prices they have done so upon their own judgment.

All that we have said regarding the strength of the wool market may be here repeated. Wool is scarce, not only in Boston but all over the world. The demand for it is stronger than it has been for years and values are advancing in every wool market. As we said in January, we see before us no condition that would justify a decline in prices, and there are many conditions that would indicate that wool may not have as yet reached its limit

of value. The London market is in better shape than it has been for many years, and the shortage of the past year is just beginning to make its existence felt. In addition to the shortage that existed last year in foreign countries, we had a shortage in this country, and in addition to this it can be safely predicted that our 1914 wool clip will be around 40,000,000 pounds less than the 1913 clip. Reports from all over the country indicate a rapid decline in the number of sheep and it is inevitable that this must be followed by a decline in our wool crop.

Another feature of importance to the wool grower is the condition of his wool. We may safely say that with the exception of a few small sections the 1914 wool clip is one of the best, if not the best, produced in the last twenty years. The wool is clean, well grown, and decidedly strong, and had market conditions remained the same it would be worth more money than last year's clip.

We cannot attempt to advise wool growers whether or not to sell their wool, but we may say in closing that the market is in a mighty healthy condition, and demand is broader and stronger than for very many years.

ELECTRIC LIGHTS FOR FARMS.

Negotiations are in progress between the Montana Power Company and farmers in several localities around Billings for running supply lines to furnish electricity to groups of residents of the rural districts. The plan is for the farmers to associate themselves together to form small companies to distribute the current to their farms from one central point, to which the line of the power company will reach. This will give the farmers electricity for power and domestic purposes at a small cost.

A LETTER FROM WYOMING.

To The National Wool Grower.

"Allow me to congratulate you on the big success of the National Wool Grower. I have heard several express the same sentiment."

Wool That Is Pulled

(By J. E. POOLE)

NOT all the wool that finds its way to eastern lofts passes through the shearers' hands. Approximately the fleeces of 13,000,000 sheep, which represents the annual slaughter in the United States, are "pulled." This means in the aggregate that the big packers and a few "pullers" on a small scale handle about 50,000,000 pounds of wool and the larger part of it is packing house by-products.

Chicago is the principal wool pulling point in the country. New York, Kansas City, Philadelphia, Cincinnati and a dozen places of lesser importance, has wool pulling plants, but at Chicago the entire slaughter of that market, together with the major part of the takeoff at western points is handled. Swift is the heaviest puller, Armour coming second and the S. & S. concern third. Some packers sell pelts just as they are taken off the sheep; others carry the preparation process to the scouring stage. All aim, however, to get the last possible cent out of their fleeces.

The question will naturally be raised as to whether or not the grower gets value for the wool he sells on the sheep's back. Consensus of opinion among the sheep house talent is that he does not. As one of them puts it: "Few sheep buyers are good judges of wool and most of them are indifferent on the subject. There are exceptions of course, but the average buyer has his mind on meat, his chief concern being what the dressing sheets reveal. He operates for paper returns and wool is usually the last thing on his mind or in his eye. It is a by-product in every sense of the term, and as the packer has a method of bookkeeping by which the mutton carries the load and the buyer gets credit for only part of the fleece value the indifference of the latter concerning the fleeces he gets with his daily purchases is logical."

Sheep growers visiting Chicago, could spend an interesting and instructive hour inspecting the process of pulling and preparing wool for market. The object lesson would convince even the most

skeptical of the profitability, if not the necessity, of grading the staple. To such a system has the packer reduced this that he sells his wool in 73 distinct grades and when he sends the dealer or manufacturer a ten pound sample of any grade it is a cinch of the lead pipe variety that the production of the current month will be up to the standard of the sample. Should a dispute between the packer and the dealer as to the quality of the sample arise, the former invariably scours it, consequently the purchaser of pulled wool knows just what he is getting.

Properly speaking, pulled wool is washed wool. The packing house process is by no means complicated. Chicago takeoff is handled by the puller, promptly and much of the time the wool has been separated from the skin within eight hours after the sheep has sounded its dying bleat. Pelts sent to Chicago from other markets, are salted at the time of slaughter and handled more leisurely. Winter is the season of greatest activity in a "pullery;" night gangs being frequently worked while in the spring and early summer when shorn stock predominates, the puller has a season of comparative idleness. As the cost of pulling a fleece is about fifteen cents, some wool must be scoured to pay expenses, and until a growth of five-eighths of an inch has accumulated after shearing, pelts are converted into what is known as "beaver stock" the short, velvety nap making an excellent and deceptive imitation of genuine beaver fur, which is merely another demonstration that in the many and varied processes for which packingtown is noted nothing is lost but the expiring squeal of the pig.

Preliminary to reaching the puller, the fleece is subjected to a thorough washing process. In huge vats containing hundreds of pelts, the mass is agitated for hours by powerful revolving paddles until the water runs clean. Hence the mass goes to centrifugal drums in which it rotates at a speed of 1800 revolutions per minute, that process eliminating all but 40 per cent of the water taken up in

the washing tanks. The next step is applying the depilatory, a black mixture of about the same consistency as paint, which is laid on the flesh side of the pelt with brushes, the fleeces being folded and placed in piles until chemical action, which consumes about twenty-four hours, permits the pulling operation. Formerly this was accomplished by a lengthy sweating process, but chemical science, of which the packer has availed himself freely, has materially facilitated and cheapened the task.

Wool pulling appears to the uninitiated to be a simple task as once the depilatory has loosened the roots of the staple, no muscular effort is needed to separate it from the skin. The wool puller is also a grader in a preliminary way. In practice he throws the pelt over a covered metal table, scans it a second or so and then begins pulling vigorously. Surrounding him are a dozen cans, among which he distributes the wool according to his idea of how it will grade. He averages ten fleeces an hour. The rapidity with which the work is done, is calculated to impress the observer that grading is a mere bluff and yet these pullers by long practice are able, between the functions of touch and vision, to do remarkably accurate work. Roustabouts assemble the different grades at drying machines where the wool is passed through steam heated cylinders removing practically all moisture. Further grading is subsequently done until each grade represents a standard. Finally the wool is baled under compression, bound with burlap in packages weighing 280 to 290 pounds. Each bale measuring up to the sample shipped to the buyer.

Pulled wool by reason of its freedom from dirt and other foreign matter shrinks much less in the scouring process than wool that is shorn from the sheep. It therefore commands more money than the western wool containing tags, black wool, and much else that is not wool. The range of prices at which the packer sells his

wool is 20 to 40 cents per pound, 25 to 30 cents taking the major portion of it. The average selling price of one of the big Chicago outfits in 1913, was 31 cents per pound, the figures indicating the profit of preparing an article in marketable form. The wool expert of one of the packing concerns said: "If it were an economical method, we would bag out wool in a mass just as it comes off the sheep, but experience has taught us that grading is profitable. We are under the necessity of getting the last possible cent out of our products, and in the future development of the business I believe the packer will sell every pound of his wool scoured. Swift & Co. has already adopted that policy with good results. When we sell in samples we make an allowance to the buyer if the succeeding months production does not equal the sample and where a difference of opinion arises the scourer is allowed to settle it."

"Slats," as sheep skins minus the wools are known, go to the wash room after leaving the pullers hands. Here every trace of animal matter is removed. The packer aiming to get the same result with this product as with the wool; that result being the maximum. Sheep skins have advanced materially in value since leather scarcity became acute and the uses of that commodity have increased. Pulled staple is slightly longer than the shorn article and in the case of wrinkley fleeces, the puller gets all the wool while some is lost in shearing. However, the difference in weight secured by the two processes is not material. Packers do not confine their operations to fleeces from the sheep they slaughter as they are wool dealers on a large scale. They buy much "dead wool" fleeces taken from western sheep that succumb to winters vicissitudes and one of the Chicago pulleries displays a curiosity in the shape of a huge pile of foreign matter containing an assortment of nails, cans and other hardware, on which the washing operation had no perceptible influence. That mound of junk is convincing testimony that western clips and

fleeces contain something other than wool. Packers handle their wool in a manner calculated to convince even the most skeptical that grading is profitable. Of course the somewhat complicated process they have adopted is unpractical so far as the grower is concerned, but their practice might be adopted to the extent of grading and keeping black wool, buck wool and tags separate. That grading pays is abundantly demonstrated by the mere fact that the packer does it.

SACKING WOOL.

As the wool season is approaching we desire to call the attention of woolgrowers to the fact that the minimum weight on carloads of wool in the sack is 24,000 pounds. This is the minimum established by order of the Interstate Commerce Commission two years ago. The first year this minimum was in effect some difficulty was experienced in reaching it with the lighter wools where 36 foot cars were used. Last year the complaint was less and we believe as the woolgrowers use more care in sacking their wool the impossibility of loading the minimum will disappear. Probably more than 90 per cent of our western wool can be loaded 24,000 pounds in a 36-foot car. It has been the experience of sheepmen that where the minimum could not be loaded in 36-foot cars it could be readily reached in either 40-foot or 50-foot cars. While of course the minimum is higher in such cars it is more easily reached. Outfits that had difficulty with the 36-foot car are now ordering 40-foot cars and we hear little complaint. Certain sheepmen have felt that the minimum should be reduced to 20,000 pounds. This would be alright if the rate remained the same, but the Interstate Commerce Commission has indicated that if the minimum was reduced the rate would be raised. This would make the rate no lower on the light wools, but would make it higher on the heavy wools that are decidedly in the majority.

If the woolgrowers will use care in sacking their wool, they will find that relatively little of it cannot be loaded 24,000 pounds in a 36-foot car. Wool

should be sacked as tightly as possible. It cannot be injured by such a process and aside from the saving in freight there will also be a saving in sacks and cost of handling.

GOOD OUTLOOK IN WYOMING.

Replying to your favor of 13th inst. Range conditions in central and northern Wyoming this winter have been generally very good. In east central Wyoming the big snow early in December reached a little way north of the Northwestern Railroad, and did not melt until early in January. In the northern sections we are informed that there has been very little snow and the sheep are in fine condition as the range was good. In the central part the early snow compelled some feeding but only in certain sections and in not very large amount.

There have been practically no losses and sheep are strong and thrifty; with the good weather during nearly all of February and plenty feed on the open range sheep have naturally done well, which means a good strong well-grown staple of wool. Since the first of the year the weather has been seasonable and good for the time of year, excepting the first week of February which was very cold. One noticeable feature has been the lack of wind which will prove a large factor in keeping the fleeces free from dirt. In fact, so far as weather conditions are considered there has not been a more favorable year in some time in producing a high quality of wool. There should be about the same number of fleeces as last year, with a good percentage of yearling wool as many ewe lambs were held last fall to replace the old ewes.

Yours truly,

ROSCOE WOOD—Wyoming.

A LETTER FROM TEXAS.

To The National Wool Grower.

"Enclosed find check for two dollars. Please send the National Wool Grower to the names given at the bottom. This is the only paper of which I keep a file."

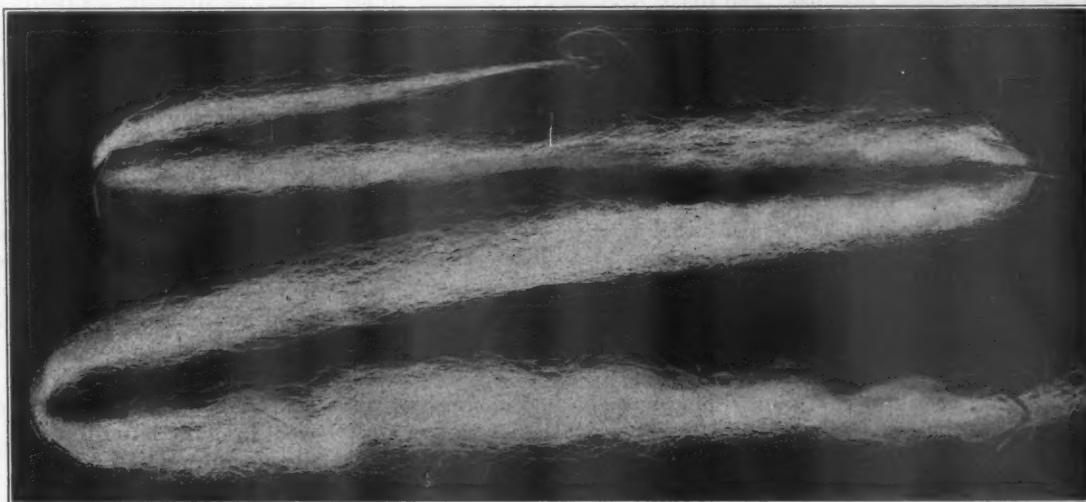
Our English Wool Letter

"SHARP RISE IN PRICES"

Bradford, February 18, 1914.
A MARKED change has come over the textile industry particularly at the raw material end of the trade the first month of the year opening with business distinctly better than the majority expected to see. As a matter of fact, business seems to be steadily improving, although complaints are yet general among spinners and manufacturers. We have seldom known a time when the anomaly has been so pronounced as at present. On the one hand we have very active and rising markets for the raw material, on the other we find

as it stands, although the explanation may be a difficult one. We can only judge the manufacturing end of the trade in the light of the present demand for the raw material, but whether users are doing right in purchasing on the present scale and paying today's prices remains to be seen. We must admit that we should have felt far more comfortable if spinners and manufacturers had been busier than they actually are, but during the past month great efforts have been made by representatives of Bradford houses in particular in overseas selling centers to obtain

everywhere during the recent spell of pronounced activity combers, spinners and manufacturers have installed new and quicker running machinery. Wherever a vacant place could be found, spinners have put in new spinning frames, also many mill enlargements have been made, the result being that everywhere old machinery has been scrapped and new installed, and one cannot turn anywhere in manufacturing circles but what he is met with the fact that enlarged plants are the order of the day. Now we all know that quicker running machinery is making a bigger



Lincoln Wool Twenty-three Inches Long

spindles and looms are not fully occupied, and yet fine tops have risen fully 4c per pound from the lowest point of last December. Of course, spinners and manufacturers affirm that there is no need for any such advance, the present state of the manufacturing end of the industry not warranting any rise whatever. Still we have the fact that wherever wool is being offered for sale there are a multitude of buyers ready to pounce upon it, a clear proof that users must have confidence in the future, otherwise they would never be purchasing as readily as they are doing. We have to face the fact

the raw material, and we find today prices everywhere distinctly against the buyer.

Keeness for Wool Explained.

The question has been asked a score of times if an adequate explanation could be given for the present state of distributing centers, for wool everywhere is being absorbed with keen relish. What is the secret of it all? We can only offer one explanation. It is an acknowledged fact that during the past four or five years the consumptive capacity of spinners and manufacturers has increased by some-thing like 15 per cent. We find that

demand upon supplies than formerly, for even a tyro can see that a bigger output means a correspondingly bigger consumption. All this we say is being reflected today upon manufacturers, more wool being required to keep machinery running. It is quite true that the majority are experiencing no pressure; they are comparatively speaking quiet, still in their eagerness to run their machinery, they have cut down prices to the last fraction, the result being that all alike are making a desperate effort to run their plants, even though they have entirely sacrificed their margins. All this we

say goes back to first principles, namely, that there is a larger consumption than ever of the raw material.

Crossbreds in Coleman Street.

Since writing last, the first series of London sales have come to a finish, that center clearly demonstrating the standing of the raw material. All medium to good merinos appreciated 1c to 2c per lb., medium and fine crossbreds did likewise, and coarse crossbreds were at the finish mostly 1c dearer. Of course the quantity available was exceedingly limited, and less than usual. The chief cause was the strike in New Zealand last October and November, but all the same the call for the raw material was very good, though we certainly think prices appreciated somewhat owing to the limited supplies. With the improvement that has taken place it looks to us as if the next series of London sales will bring forth prices fully equal to those current in January. For undoubtedly there are scarce supplies of crossbreds in Bradford, and all topmakers and spinners alike are anxious to cover their contracts. How those will fare who have sold 40's prepared tops at 28c only time can decide, but it certainly looks as if they have taken on more than they can deal with without a distinct loss. Of course, topmakers never expected to see prices appreciate as they have, but this is the direct outcome of an increase of business; in other words, it is a natural development, and all the more healthy because of it. After the extreme quietness which prevailed in December and the steady decline in prices, very few expected anything but a continuance of the same factors so long as the yarn trade remained in an indifferent state, but the improvement coming has upset the ideas of many people, although the majority are looking forward to adequate supplies having some effect upon prices for wool.

A SPURT OF BUYING.

Since writing last a complete change has come over the Bradford market. As a matter of fact, considerable excitement prevailed the first week in February, there being a market such as one

sees perhaps once in five years. It turns out that during the week a very considerable business has been done both in crossbreds and merinos, there being a perfect scramble to cover previous sales of tops and yarns. This has produced quite a change in the outlook, and the volume of business done has certainly been very considerable indeed. The market today presents a different appearance altogether, everybody alike has turned from being a pessimist to an optimist, and the outlook is distinctly clearer. Today's price for 40s tops is 32c, so this makes the outlook for the March series of sales very bright indeed. There has been a good deal of cheap talk indulged in lately that we should see crossbreds lower, but the reverse is more probable and today wool looks like being 10 per cent dearer all along the line. It appears that the move is primarily due to big sales of yarns which have been effected. Our export houses have been selling abroad and taking ridiculously low prices, and one or two firms beginning to cover has frightened the rest, who have followed in sheep-like fashion until prices have been lifted completely out of the Slough of Despond.

Bradford's American trade has also been a prime factor in bringing about the improvement. For January the shipments are over half a million sterling, and big increases are seen in the export of wool, stuff goods, worsted coatings, wool tops, wool noils and wastes, all important items which affect the course of wool values and which are certainly going to be in favor of consumption.

ENGLISH WOOL TRADE WITH AMERICA.

There are increasing quantities of wool being shipped to your side, as evidence the January returns from the Bradford Consular District. In fact, everything points to a big trade being done this year in the raw material, as well as partly and fully-manufactured articles, particularly tops, noils and wastes. The incoming of the United States has made a big difference to the

English trade, and it has pulled the chestnuts out of the fire. As a matter of fact, things were in the soup until your side opened its ports, and ever since Bradford and district has not looked back, and today everything is dearer, with a distinct upward tendency. The improvement has been most marked in merinos and New Zealand crossbreds, English wools as yet only benefitting moderately. As a matter of fact, these were held for higher prices than similar qualities of New Zealand crossbreds, and today domestic wools are moving more freely without commanding more money. One rejoices that the outlook for American grown wools is better, and I think that the worst is passed. United States sheep breeders must stick to their flocks at all costs, for there is no room whatever for throwing them overboard. I am a firm believer in the triumph of the sheep, and its fleece will be higher before lower. The principal English wools being shipped to your side are Lincoln wethers, North wethers, Irish, demi-lustre wools, large weights of Downs, Kents, half-breds and Scotch Blackfaced. The outlook from an English sheep and wool standpoint is very good and business shows signs of expansion all down the scale. The shipments from both Leeds and Ruddersfield have also doubled during January, wool from the latter town being sent in big quantities by one firm. Bradford is busier than it has been for six months, and American influence is making things hum at a different rate from what we saw towards the end of last year. The exports of wool from last month from Bradford were, British £68,113, and Foreign and Colonial £111,094.

ENGLISH LAMBING SEASON.

It is yet too early to give any general report upon the present lambing season in this country, for the simple reason that small as the British Isles are compared with many other countries, they are sufficiently large to admit of a fairly wide diversity of climate, and an equally great variation in

the time when different flocks commence lambing. The earliest flocks, that is those kept in the south of England have already finished and taken as a whole the results may be said to be fairly satisfactory. This is particularly true of the Devon flocks. This is a very good breed, and though perhaps not quite so popular as the Leicester or Lincoln, is a fairly reliable type from a breeder's point of view. Perhaps one reason why it has as many devotees is that the wool is of a class which finds a ready sale, the trade in which it is used having been fairly regular. Apart from this, however, the flocks have yielded exceedingly well. There has not been a large proportion of twins, but what is more important is that both lambs and ewes are strong and healthy. This is largely attributable to the mild winter we have had.

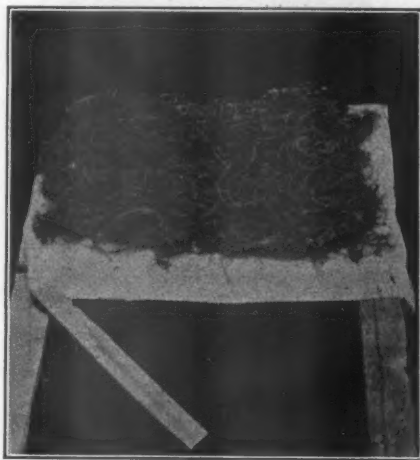
We scarcely seem to have had any at all, the whole season being generally mild and open. Feed has consequently been fairly plentiful, and though in some cases the root crops have been barely sufficient, having suffered by the dry summer, the decent bite of grass which has been procurable has given the sheep a better chance. So far as flocks in the north are concerned, prospects are good. The ewes are getting through the winter exceedingly well, and are in good condition. If there should be a change before the lambing commences, the lambs themselves may not have a pleasant reception, but should be vigorous enough to stand a little rough weather.

MAINTAINING THE SHEEP FLOCKS.

The inter-relation of supply and demand in the wool trade is so close as to be practically beyond the possibility of any correct description, but this in itself need not in any way prevent the wool grower from putting the best into his work, or feeling any hesitancy about the future security of the material he produces. The indications in the wool trade today in spite of the unsatisfactory influences which are undoubtedly at work, are such as to show

that there is still ample scope for the original producers skill and enterprise. What we wish to say is quite apart from any of the technicalities of the manufacturing trade itself, but we believe that our remarks will have a very important bearing thereon, for without the work done in the wool growing areas of the world there would be no possibility for the carrying out of all the scientific and technical processes which are so necessary for the production of good saleable fabrics. We wish to speak in plain terms about some of the details which require considering when the production of a maximum amount of wool of the best type is being aimed at.

No one who has not had practical experience in the matter can fully real-



Jute Fibers Shaken Out of Wool Sacks

ize what a difference is made even to the wool clip of the individual, saying nothing about that for a whole country or locality, which is met by a large number of casualties among the flock during the course of the year. In this country we have already received reports of the progress of the lambing among the flocks in New Zealand, and have learned that an abundant supply of grass and other favorable conditions have contributed very much toward the rearing of a large number of lambs which should ultimately become members of the flocks. Of course we are not forgetful of the large trade which is done in export-

ing lamb and mutton carcasses beyond consequent losses which is suffered by the sheep flocks on this account, but at the same time it is impossible to produce lambs without having sheep, and some at any rate must be kept for this purpose at some later date.

It is impossible to lay down hard and fast rules as to how many ewes the pastoralist is likely to be able to keep in the future, and consequently it is equally difficult to decide with any measure of certainty what proportion of the ewe lambs may be carried forward for coming seasons, and on this account, there may be the possibility of keeping either more or less than will be justified by later developments. As to which of these mistakes is the most serious, is perhaps not an easy matter to decide, for when too many are kept, losses will follow in consequence of there not being sufficient nourishing food available to sustain the want of all. On the other hand keeping too few particularly when grass is plentiful may result in even less being found on the place than was originally intended, simply because the overflush of diet has been too much for many of them, bringing about a reduction which is not pleasing to contemplate. Under these circumstances it is well to bear in mind what may be done towards avoiding the latter named contingencies. In all countries where sheep are reared, it is the custom at some time sooner or later after the lambs have got well on to their feet to detail them, and opinions as to when this should be done, vary somewhat. It is argued that the earlier this is done the more humane the operation, and the less injury to the constitution takes place. This idea may be very good so far as it goes, but it is in reality somewhat one sided, and there are some strong reasons why the operation should be deferred. Perhaps the strongest reason of all is that when the lambs are older and have got into good condition, the docking, serves the very useful purpose of preventing a further development of the congested condition and system which is very often re-

sponsible for sudden attacks among lambs which were apparently in a thriving and flourishing condition. The loss of blood at the time of the operation temporarily weakens the system, without doing any actual injury, and when the lambs are strong, healthy and full of flesh, with rich blood in their veins, the loss of a small quantity of the latter does not do much, if any harm. What we want to point out is that if the losses which so often take place among the lambs after they have attained the age of two, three or four months, can be prevented, something will be done towards keeping up the wool clip and bringing in a satisfactory return. In these days of high wool prices, the wool grower himself can ill afford to miss anything by letting his flocks decline in numbers, and it need not be said that the flocks are more easily depleted or reduced in respect to their good characteristics than the standard can be maintained.

RETURNING TO FIRST PRINCIPLES.

Originally all Australian wool was transported from Australia to London by sailing vessels. Then came the steam vessel and a rate war ensued that resulted in driving the sailing vessel out of the wool carrying trade. When the competition of the sailing vessel had been eliminated the steamers advanced their rates. Now there is a movement on foot to encourage the sailing vessel to again enter the wool trade.

From Australia to London by sail takes 100 days and by steam 30 days. There are times of course like the present when wool is scarce and the saving of time in transportation is important. However, year by year the European mills are buying more of their wool in Australia and less of it in London. This tendency is a most commendable one, and as a mill buys a year's supply in a few weeks, the necessity for haste in its delivery is eliminated, thus the slow sailing vessel not only affords lower rates, but does away with much expensive storage.

The rate by sail to London is one cent

per pound and by steam one and a half cents. The charges for storing wool in Bradford, England, are now 18 cents per ton for the first week and 12 cents per week thereafter under a new agreement effective this month the storage charge in certain British warehouses is to be 6 cents per ton per week.

BOSTON WOOL MARKET.

Domestic Wools.

Ohio and Pennsylvania Fleeces.

Delaine washed	27½@28
XX	26½@
Fine unmerchantable	23½@24
½ blood combing	24 @25
¾ blood combing	24 @24½
¼ blood combing	24 @
½, ¾, ¼ clothing	22 @
Delaine unwashed	23½@24
Fine unwashed	22 @
Common and braid	@21

Michigan and New York Fleeces.

Fine unwashed	21 @
Delaine unwashed	22 @22½
½ blood unwashed	23 @24
¾ blood unwashed	23 @
¼ blood unwashed	22½@
½, ¾, ¼ clothing	21 @
Common and braid	20 ½21

Wisconsin and Missouri.

¼ blood	22 @22½
Braid	20 @20½
Black, burry, seedy cotts.	18 @19
Georgia	20 @21

Kentucky and Similar.

½ blood unwashed	23 @24
¾ blood unwashed	23 @24
¼ blood unwashed	@23½
Common and braid	21 @

SCOURD BASIS.

Texas.

Fine 12 months	53@55
Fine 6 to 8 months	48@50
Fine Fall	43@45

California.

Northern	@50
Middle County	45@46
Southern	42@43
Fall free	42@43
Fall defective	35@38

Oregon.

Eastern No. 1 staple	57@58
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Eastern clothing	53@54
Valley No. 1	47@49
Valley No. 2	44@45
Valley No. 3	39@40

Territory.

Fine staple	58@60
Fine medium staple	53@54
Fine clothing	53@55
Fine medium clothing	50@52
½ blood combing	54@55
¾ blood combing	46@48
¼ blood combing	41@42

—Commercial Bulletin.

LONDON WOOL AUCTION.

(Cable to Daily Trade Record.)

London, March 12.—The regular correspondent of this paper, attending the eighth day of the current series of London Colonial wool auctions, cables:

One of the best selections of the series was offered today by Thomas & Cook and Willans & Overbury.

The offerings included a good selection of crossbreds, suitable for all sections.

Withdrawals were practically nothing.

American buyers operated more freely in all classes of crossbred wools, for which prices are steadier.

Americans have taken almost all the best greasy crossbred fleeces, 36s to 40s.

Some of the American qualities in grease, sold today, were:

36s to 40s at 12d, estimated shrinkage 24 per cent.

56s at 15d, estimated shrinkage 38 per cent.

English buyers bought very freely greasy crossbred 40s to 44s and 46s.

English and Continental buyers have taken nearly everything in all classes of combing greasy merino wools, for which prices are very firm.

Rhode Island and Delaware each have but 5,000 sheep, yet these two states were among the first to bring sheep to this country.

Pulled wool sells for more than shorn scoured wool. This is because the staple is longer and the packer holds it until he gets his price.

American Territory versus Australian

SOME INTERESTING COMPARISONS. (By S. H. HOLLINGS, Bradford, England)

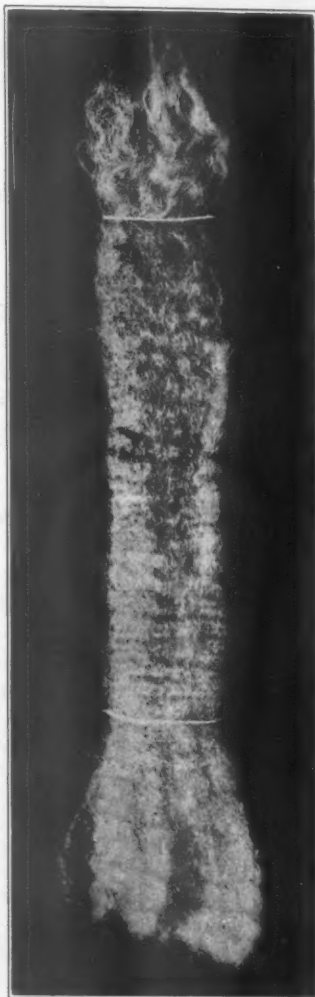
Last spring the National Wool Growers' Association sent several fleeces of typical territory wools to London to be exhibited to the trade. London's best wool expert wrote a criticism of these wools. This was published in the Wool Grower last spring and it is again published below by request of some sheepmen.

I HAVE received from the National Wool Grower's Association nineteen representative fleeces of American grown wool, which I have carefully examined, and it has been a real pleasure to do so. I have seen samples of United States wool before, but never whole fleeces, and after all one cannot really estimate the quality and character of a fleece unless he sees it thrown on to the sorting board. At this critical time in the history of the United States wool trade, the fleeces in question possess more than ordinary interest, for no doubt their supremacy will be challenged in the near future by large imports of similar quality wools grown not only in Australia, but also South Africa. I dare say that a very keen fight will be waged between foreign imports and domestic grown fleeces, but I would say with all the emphasis at my command that the present is not the time for a single American sheep breeder to relinquish his flocks and it is to be hoped that every reader of this issue will manfully face conditions, and refuse to throw overboard the stock which still is fashionable, and ever will be.

Let me say straight off that these American fleeces are of a very useful stamp. All my life I have been connected with the trade, and have gone to London wool sales for twenty-five years without a break, so should know a little.

So far as quality is concerned, the fleeces in question are certainly very good, and contain the characteristics suitable for producing first class fabrics. In England we are not familiar with the descriptions attached to wool in the United States, our denominations describing the quality or spinning count of wool. For instance, all fine wools are known as merinos, and

then begins from 58's downwards a long range of crossbred qualities, whereas on your side wools are known as 3-8th blood, 1-2 blood and 1-4 blood. These are somewhat unfamiliar terms to the writer, and I know the territory wools best by the count or quality. For instance, the Wyoming



Corriedale Wool

wools described as "extra heavy, fine and fine medium staple" were all good 64's, while 3-8th blood staple was 56's, ranging up to 60's, and 1-4 blood staple about 48's quality. Another thing which to my mind is a little misleading is the 1-2 blood clothing (Wyoming) which ran up to 60's qual-

ity, and was indeed a very fine fleece when viewed from that standpoint. In this country 1-2 bred wools are those produced by two distinct breeds, and when applied to New Zealand fleeces means the wool from a merino ewe and (say) a Lincoln sire. Such a fleece would be known as half-bred and its quality would range from 50's to 56's. I do not remember seeing a half-bred clothing wool that would scale 60's. This (American fleece) really was a fine comeback fleece, but all the same it was of a very useful character.

Among the Montana wools, the 1-2 blood staple was 58's quality, 1-4 blood staple 50's, 3-8 blood staple 56's, while fine and fine medium clothing was good 64's.

The Idaho fleeces were very similar in quality to the previous ones, the fine and fine medium clothing being 64's, although this fleece was a little coarse at the britch, 1-2 blood clothing was 58's quality; 1-4 blood staple 48's, and 3-8th blood staple 56's. I am not so much concerned about the denomination of the staple, providing the raw material is right, and upon that score no fault can be found.

Perhaps the reader will be most interested to know what are the different characteristics of Australian and New Zealand wools compared with their own sorts. Let me say that it will not be the quality of their competitors' wools which American growers will have to fight, but rather the condition and clean yield. It is here where the keenest struggle will obtain. Some of the best fine fleeces I have had under consideration would not give a clean yield of more than 38 to 39 per cent, although the others would yield anywhere up to 45 per cent. Still many of the fleeces would not give at best 40 per cent when scoured. Now, it is an exception among average New Zealand merino fleeces (60's to 70's quality) to find them giving below 44 per cent. I should say that the bulk will give them 46 to 50 per cent clean yield, and if wool is going to be in-

ported free into America, buyers will no longer be compelled to hunt for the very lightest conditioned greasy wools yielding up to 54 to 56 per cent, but will be able to buy what I call medium fleeces yielding from 45 to 50 per cent.

The American wools were very fatty and heavy in condition. It is here I think where they are a little wanting. The bulk of these territory wools were of the South African type, except those showing a quality from 48's to 56's. All the finer wools were very similar in style, condition and character to the heavier descriptions which come from South Africa. It would be a very good thing indeed if the officials of the National Wool Growers' Association had to get together a score representative samples of Australian merinos and exhibit them at the next National Convention for they would be of great educational value. I am well aware that to grow these lighter conditioned wools will practically be an impossibility in the states, but all the same it would be an eye opener to many growers to see what is being produced in other parts of the world.

Perhaps the matter in which the greatest improvement can be made is in the preparation of the wools for market. I certainly think that all the heavy britch should be removed and sold by itself. I am well aware of the fact that some small farms where no more than a few hundred sheep are kept, it is useless to recommend a proper system of grading, but all the same the heavy britch and "muck lumps" should be moved. This should be done, the fleeces being roled up in the ordinary way, and tied either with a neck band made from the fleece itself or else with paper twine. But I would like to suggest the advisability of making the fleece as presentable as possible to buyers, and there is nothing that drags down the value per pound so much as heavy muck lumps being attached to the fleece.

The above are to me the points which arise out of a consideration of the fleeces named. As already said the

wool is right enough when clean scoured, but the shrinkages are heavier than the bulk of the wools that are sold in London. It may surprise readers to know that New Zealand crossbreds this year are yielding up to 82 per cent, but the wools in question would give nothing near this. It is these light conditioned crossbreds which hitherto have commanded the most support at the hands of American buyers, hence the reader will see how important it is to produce good, sound, and light conditioned fleeces from American pastures, but all the same it will be the good average merinos from Australia as well as the superior lines, together with the light conditioned crossbreds from New Zealand which will form the basis of competition in the future.

WHAT DOES THE FLEECE WEIGH.

The average weight of fleece of all American sheep is just under seven pounds. The average shrinkage is 60 per cent. Our sheep are therefore producing about 2¾ pounds of clean wool per head. It seems to us that this is not enough. Aged sheep in Australia produce about 8 pounds of wool shrinking 54 per cent and yielding 3.6 pounds of clean wool, nearly a pound more clean wool than we get. Even at this we do not feel that Australia has reached the limit in the weight of fleece. It would seem that if we used care in the selection of our breeding sheep we should be able to add another pound to our fleeces in a relatively short period.

Few wool growers know which ewe or ram is producing a profitable fleece. They know the average for the whole flock, but in every flock there are sheep that produce twice as much wool as others. The poor shearer drags down the average returns from the good ones. Many of our sheep, like a majority of the dairy cows in the United States, are merely boarders so far as wool production is concerned. These poor producers can best be detected at the shearing pen. At that time every fleece should be examined for length of staple and charac-

ter of wool; those yielding short stubby wool should be branded, and discarded. A pair of small scales can be carried in the shearing pen and each fleece weighed without much inconvenience and the light shearing sheep can thus be detected. Of course a blind weighing of the fleece might lead to a retention in the flock of such sheep as produce heavy shrinking wool, but this can be avoided by examining the fleece and estimating whether the weight consists of wool, which is valuable, or grease and dirt which is of no value.

The sheep man may think that this is a good bit of trouble, but we know a sheepman who has weighed the fleeces from about 12,000 sheep three years out of the last six years. He does not think it very much trouble and recently told us he proposed to continue weighing and examining each fleece at shearing time. For this man the scale has picked out rams that cost a lot of money which were producing less and shorter wool than rams, equally as good in form, that cost decidedly less. We often wonder how many woolgrowers have made any examination of the fleeces of individual sheep.

CORRIEDALE WOOL.

We have had much to say in the pages of this paper about the Corriedale sheep of New Zealand. Recently we received quite a parcel of Corriedale wool. Should anyone desire a sample of this and will send four cents in stamps we will gladly forward a lock of the wool.

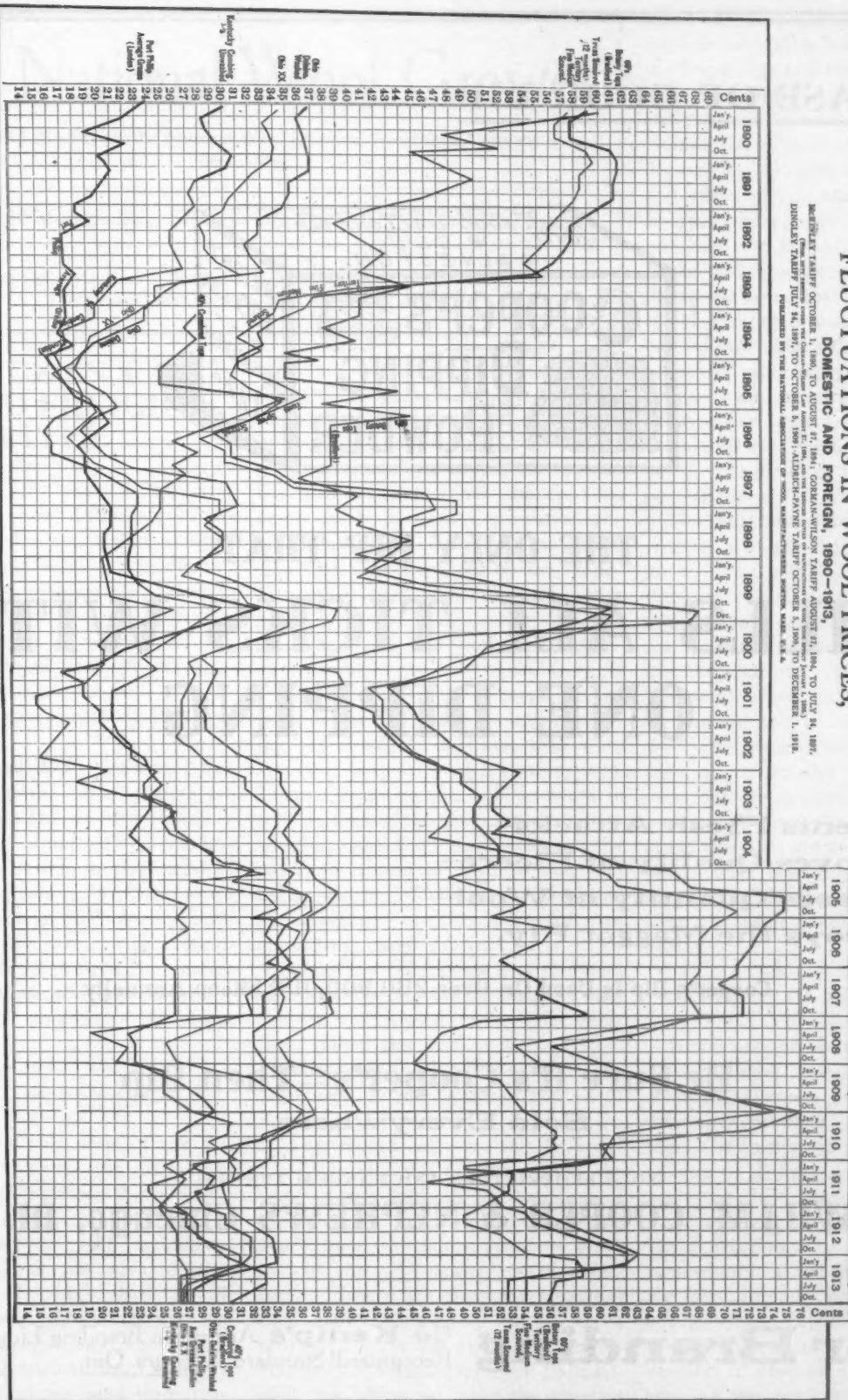
HORSEFLESH SOLD IN MONTREAL.

Reports from Montreal, Canada, state that the city's health authorities have admitted that there are large quantities of horseflesh being sold as sausage and beef in Montreal. Steps are being taken to prevent it, although medical men are not in agreement as to its demerits as food. —Provisioner.

The habit of estimating all western wool as shrinking 66 per cent is firmly entrenched in eastern markets.

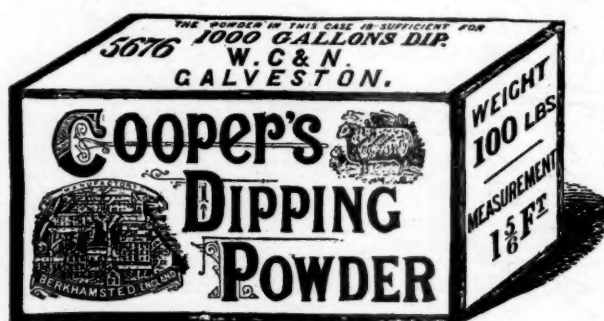
FLUCTUATIONS IN WOOL PRICES,

DOMESTIC AND FOREIGN, 1890-1913.
 BASED ON THE LATEST AVAILABLE DATA.
 DINGELY TARIFF JULY 24, 1891, TO OCTOBER 5, 1891; ALDRICH-TAMM TARIFF OCTOBER 5, 1891, TO DECEMBER 1, 1913.
 PREPARED BY THE NATIONAL ASSOCIATION OF WOOL MANUFACTURERS, NEW YORK, N. Y.



London price of Port Phillip wool, Mainmuth Schwartz & Co. Bradford prices Merino and Crossbred Tops, Boston prices of American wools.

A CASE OF GOOD DIP



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The National Wool Grower

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Edited by the Secretary

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ADVANCE IN EAST-BOUND FREIGHT RATES.

Practically all western railroads have filed with the Interstate Commerce Commission notice that on April 1st they will advance the eastbound rates on sheep approximately two cents per hundred pounds. This advance affects shipments from most of the range country to all Missouri and Mississippi river markets as well as Chicago. The advance is about \$5.00 per car.

The National Wool Growers Association feel that the existing rates are already too high and we have therefore filed with the Interstate Commerce Commission a strong protest against any advance in rates. We have asked for a suspension of the advance until such times as our case can be presented. We will have to fight this matter out before the commission and we expect the hearty support of all sheepmen.

ALL IN THE SAME BOAT.

After reading this issue of the National Wool Grower the sheepman may reach the conclusion that we have criticized his methods of handling and marketing his wool with undeserved harshness. We do not wish to leave the impression, however, that in his methods the wool grower is one iota less progressive than any other branch of the whole American wool industry.

Every phase of our wool trade from the time the wool starts its growth on

the sheep's back until it emerges as a finished garment is tarred with the same stick. The methods employed in handling and selling wool in the great wool markets of this country are not one wit better than the methods employed by the wool grower in the producing and marketing of that wool. The efficiency displayed by the manufacturer of wool is not on any higher plane than that maintained by the wool grower. The average of efficiency in our whole wool industry is low, very low. The sheepmen, the wool dealer and the mills are employing the same old methods that were in vogue a quarter of a century ago. There are among the wool growers as well as among the manufacturers men who have shook off the shackles of the past and moved forward to new and better things. There is just as large a percentage of this class of men among our wool growers as is to be found in any other branch of the wool industry. Therefore, criticism of wool growers comes with mighty poor grace from either the wool dealer or wool manufacturer. All of these facts can be proven by the report of the Tariff Board.

Why should all of this be true? First, the methods employed by the wool grower both in the breeding of his sheep and handling of his wool depends upon the encouragement given him by the wool dealer and manufacturer. How much encouragement has the grower received from those sources? Some ten years ago Charles Harding, a manufacturer of Philadelphia, for whom we have the greatest admiration gave the wool growers

some excellent advice at the Portland convention. That seems to have been the beginning and the end of the educational campaign in so far as the dealers or manufacturers were concerned. Neither the agricultural colleges or the department of agriculture have made any effort to educate our wool grower upon the subject of wool. It was not until the National Wool Warehouse and Storage company showed up on the scene that any broad educational campaign was formulated and carried out. Since then this work has proceeded amazingly. Had the wool grower been encouraged to properly prepare his wool and been rewarded for his efforts, our methods would today be the equal of those used in any part of the world.

The Australian does not handle his wool any better than we do, because he is more intelligent or more progressive. He does it because it pays and it pays because those who buy and use his wool are forced to pay him for his extra efforts. When the Australian wool is sold, it is put up at public auction and is competed for by wool traders and wool manufacturers from all over the world. Merit is therefore recognized and rewarded, and it has been the reward that has urged the wool grower on to better and better wool breeding and wool handling. The same competition will produce the same results in the United States.

GRADING IN NOT SORTING.

Many wool growers refer to grading wool as being the same process as sorting. There is however a decided difference between grading and sorting. Grading wool simply means the placing of all fleeces of the same character together; that is separating the quarter blood fleeces from the half blood fleeces and so on. Grading refers wholly to the entire fleece. Sorting is a different process. It relates not to whole fleeces but to parts of fleeces. No sheep produces the same fineness of fiber on all parts of the body or the same length or character of fiber. Wool sorting means the sep-

aration of the individual fleece into its various qualities, this in some measure depending on the use to be made of it.

While wool in Australia is first graded and then partly sorted by the grower, we have never advocated wool sorting for our wool growers. We feel that all wool should be graded, that will enable the grower to sell his wool for just what it is and in many cases sell direct to the manufacturer. After we have mastered the subject of grading, and this will not be difficult, then the question of sorting may be taken up if it appears that it would be of any advantage to the grower in marketing his wool.

HOW SHRINKAGE AFFECTS PRICES.

Many woolgrowers do not stop to calculate the elements that go to determine the value of a pound of grease wool. Of course the value of all wool is represented only by the amount of clean wool that will remain after the scouring. Two principal factors influence the value of a pound of grease wool, its shrinkage and the quality of the fibre. Of course length of fibre, strength and color play some part, but fineness (quality) and shrinkage play the greater role. The fineness of the fibre is but little more important in determining the value of the grease wool than is the element of shrinkage. A quarter blood wool may be worth 40 cents per clean pound and a fine 64s worth 54 cents clean. So the difference in the clean price between a fine and coarse fibre is only around 14 cents per scouring pound. Let us see how shrinkage affects the price. Suppose an average merino fine wool is worth 54 cents per clean pound. If it shrinks 70 per cent then it is worth $16\frac{1}{4}$ cents per grease pound, if it shrinks only 60 per cent it is worth $21\frac{1}{2}$ cents, if it shrinks but 55 per cent it would be worth $24\frac{1}{4}$ cents. Take a quarter-blood worth 40 cents scoured. If it shrinks 52 per cent it is worth in the grease $19\frac{1}{2}$ cents, if it shrinks 60 per cent it is worth but 16 cents. From these figures it is apparent that shrinkage has about as much to do

with the value of grease wool as does its fineness. It is also evident that without we know the shrinkage of our wool we are not in a position to sell it intelligently unless we are to take the buyers advice on this point. But if we are to take his advice on shrinkage there is just as much reason for accepting his advice as to its value, for shrinkage determines value. It may well be that a wool which shrank 76 per cent last year will only shrink 60 per cent this year. This means a change in the value of the grease pound of 3 3-4 cents. Entirely too much to take any chances on.

A MARKET FOR MERINO RAMS.

Within the past two years very large numbers of Merino ewes and rams have been exported from Australia to South Africa. The Africans are endeavoring to improve their sheep and as they have no market for their mutton they are using only Merino rams. This will be the case for many years. From accounts at hand big prices are being paid for Australian rams, prices that would look very high to our ram breeders. The type of Merino that seems to be most in demand for this trade is the large and comparatively smooth ram with two or three neck folds, but a plain body. A few of these Africans have purchased smaller and more wrinkly rams.

We have in the United States a great number of Rambouillet and Delaine rams ideally suited to this trade. While we think that these rams should be kept and used at home it is always desirable to establish a foreign trade in purebred stock of any kind. On that ground we can spare a few of these high class rams. Several breeders in the United States are producing rams that could compete with the rams being exported from Australia. It seems to us therefore that the Rambouillet and Delaine registry Associations might well collect 200 head of rams of the desired type and send them to South Africa, under the auspices of the associations. Each of the breeders could contribute a few head and after they had been passed on by an official committee should be sent forward. In attempting

to establish a trade of this kind it is of the utmost importance that nothing but superior sheep be exported. Of course a number of our sheep have from time to time been sent to South Africa by private parties but with this there is always the danger that merit may be sacrificed in the interest of profit and thus a broad outlet be forever closed.

South Africa is going to materially increase her supply of Merino wool and for years to come we anticipate a large demand from that section for high class Merino rams. This country can satisfy a part of this demand if we shall only see to it that animals of pronounced merit are used in establishing this trade. Now is the opportune moment to start this movement for South Africa has had two years of high wool prices and is therefore able to pay good prices. We are asking the Bureau of Animal Industry to look up the African market and assist our breeders in getting the trade started.

THE CASE AGAINST JUTE TWINE.

We have been preaching paper twine for three years and to some it may seem a needless repetition to call attention to the matter here. Many western woolgrowers now use paper twine, but unfortunately a considerable number still stick to the jute. It is to the latter class that we desire to speak.

Our wools are now in free competition with the wool of the world. No tariff barrier stands between them. Foreign wool is not tied with any twine at all. This is because much of it is graded, and in some cases sorted before it is baled. It is this grading and sorting that makes it possible to bale the wool, hence twine is not needed. In the absence of this grading and sorting and baling our wool must be tied with string of some kind. We have long used jute for this purpose largely because we had no substitute and thus acquired the habit. Like all bad habits it is hard to eradicate. Jute fibers injure the wool and unfit it for the manufacture of the best class of garments. It is the wool that is used for such purposes that brings the best price,

therefore this is the trade to which all woolgrowers should cater. As a substitute for the jute twine we now have satisfactory paper twines that hold the wool just as well as jute, but do not in any particular injure it, or the cloth that may be made from it. Such twine then should be used in every instance.

Now as to the relative cost of these two twines. In olden days when wool sold at 20 cents per pound, jute twine cost from 9 to 10 cents. Today jute costs about as much as the wool brings, hence any increase in the weight of the fleece occasioned by the twine bring less money than the twine actually cost. Paper twine now costs about the same as jute twine per pound and a pound of paper will tie almost twice as many fleeces as a pound of jute. Hence paper is not only better than jute, but it costs much less. Under such circumstances what excuse can we offer for the woolgrower who still uses jute twine.

THE PURE CLOTH LAW.

It is really surprising the icy stillness maintained by the newspapers and magazines on the subject of a pure cloth law. Hardly one of them has raised its voice in favor of this much-needed and beneficial legislation. Why this profound silence? Is it, because the pages of such papers are filled with advertisements of shoddy clothing? Many of these magazines claim to stand for the public welfare and to exercise wonderful power in moulding public opinion. Their silence on this pure fabric bill begins to look as if the size of the mould depended upon the number of advertising dollars that it accumulated. When the sheepmen had a trifling tariff on wool nearly all of the current magazines devoted most of their space to telling the public what a wonderful burden this placed on the poor of the country, yet through the sale of shoddy and cotton as wool the public is robbed of 100 times more than the wool tariff ever cost them and not one of these magazines raises its voice in defence of the consumer.

In urging the enactment of a pure fabric law the woolgrowers are in earnest and many of them are becoming dis-

appointed and somewhat disgusted at the lethargy exhibited by many republicans and democratic senators and congressmen on this subject. Very few indeed, of the men who are supposed to represent us, whether democrat or republican have ever taken any interest in a purecloth law. Later the woolgrowers may want to know why this is.

CLOTH PRICES ADVANCED.

Advances on staples have been general throughout the market, in many instances aggregating 10 to 12½ cents a yard, confirming the opinion we expressed some weeks ago that prices were on an unnecessarily low basis and would inevitably be advanced in the early part of the season. The same is true of prices

As a general proposition we do not consider that contracting for wool on the sheep's back is good business, though there are times when such action is perhaps justifiable. Usually it creates in the mind of the grower a false impression as to the value of his wool, and is apt to unduly inflate prices. There are many in the trade who are inclined to take a somewhat less optimistic view of the situation and express themselves as doubtful of the wisdom of such action, particularly in a season such as that now before us. A careful study of the situation at home and abroad, however, tends toward the conclusion that wool prices are not to be materially lower in the near future. In fact, the trend of the times in agriculture would lead one to think that the fine wools, particularly, will probably be-



A Load of Baled Wool

on all lines of fancy worsteds, and it will be but a short time before advances on practically all of these lines will be announced, in fact the delay in advancing prices is largely to enable the tailors-to-the-trade, who are proverbially late in placing their orders, to take advantage of opening prices.

The anticipated firmness of the London wool sales, which opened on last Tuesday, has developed into a radical advance in prices, in many cases going far beyond the expectation of those who were convinced that covering by Bradford top makers would have a tendency to stiffen values to a limited extent. It is very evident that the trade has become convinced that the predicted shortage of the world's wool crop is an actuality and that prompt action is necessary if they are to secure desirable wools.

come scarcer and higher in price, as the demand for mutton sheep increases.—Wool & Cotton Reporter.

LEARNING TO EAT MUTTON.

That is a bright thought of the National Wool Growers' Association to teach people to eat more mutton. In a leaflet it sets forth the facts that sheep are never tuberculous; that eating fat mutton may be a strong contributing factor in a struggle against consumption; that sheep are the daintiest of animals in their diet, and that their flesh, once one is accustomed to it, is perhaps the most delicious of all meats. Further more, there is true economy in eating mutton, because the cuts are small, and there is practically no waste. Moreover, there is usually nothing left

over from the dinner at which lamb chop or boiled mutton is served. The American people are not yet a mutton-eating people, perhaps because in the "good old times" beef and pork were relatively much cheaper than at present. In Great Britain the people are the great mutton eaters, because they must practice economy, and, incidentally, because they are true connoisseurs of what is good.—Breeder's Gazette.

THE SOUTH AS A FIELD FOR BEEF PRODUCTION

Washington, D. C.—The geographical location and the climatic conditions of the south are such as to make it a good section for cattle raising. The soils are so varied that what may be said in a general way will not hold true for all places or sections of this large area. They vary from light sand to heavy clay, or to the black prairie soils, or the stiff post-oak. As a rule the stiffer the soil and the greater the content of lime in the soils, the more nutritious the grasses are, and the greater is the variety of clovers which will grow.

The Piedmont section of Virginia, West Virginia, western North Carolina, Tennessee, and northern Alabama is a fine grazing country, and thousands of good beef cattle are found there. The shorthorn is more popular than any other breed in this region, and they do exceedingly well. The grazing plants are chiefly blue grass, white clover, red clover, red top and orchard grass. The cattle fatten very rapidly during the grazing season and raise excellent calves. Most of this region is free of ticks and the losses from death are relatively small.

The black prairie section of Alabama, Mississippi and Texas, and the Delta land of Mississippi and Louisiana, are extremely favorable sections for raising and finishing beef cattle. Experiments conducted by the Bureau of Animal Industry and the Alabama Experiment Station show that cattle when kept free of the cattle tick, can be raised at a cost of 3 to 4 cents a pound. This cost includes the keep of the cows for one year, charges for pasture and all feeds consumed at market prices, depreciation in

the value of the herd, and 6 per cent interest on the money invested. The principal native grasses which are indigenous to these soils are bermuda, Johnson grass, lespedeza and melilotus; but red clover, alsike clover, bur clover and white clover grow readily when planted in the pastures, and the grazing season can be extended greatly by their use. Alfalfa, soy beans, cowpeas, corn, sorghum and other forage crops do well on these lands and produce an abundance of roughage and hays for wintering and fattening the cattle. The red clay soils produce crops very similar to those mentioned for the prairie soils.

There are great areas of "cut-over" lands in the south that range in price from \$2 to \$10 per acre, which could be used for beef production. The soil of such lands is usually sandy or post-oak, neither of which are as good for grazing as the prairie or delta lands, but which would furnish good grazing if a little care was taken in getting pasture plants started. On these soils carpet grass, bermuda, lespedeza, white clover, red top, *Paspalum dilatatum*, and bur clover do exceedingly well. The carpet grass furnishes abundant grazing on the sandy lands while the bermuda does better on the soils which are a little stiff. The *Paspalum*, white clover, and red top do well on the damp lands, and if some lime is present alsike clover will furnish fine grazing. The foundation of all pastures on sandy or sandy loam lands should be carpet grass, bermuda and lespedeza. The variety of forage crops which may be raised on this type of soils is large, and it is an easy matter to grow all the hays, silage crops and forage necessary for feeding the stock which may be kept on the farm.

One of the greatest drawbacks to the cattle industry of the south has been the presence of the cattle tick that transmits Texas fever, which kills many of the cattle and stunts others in growth. The tick is rapidly being eradicated, and it is only a question of time until the south is freed of this pest.

The native cattle of the south are cold-blooded scrubs carrying a variable percentage of Jersey blood. They are small in size and inferior in quality, but they

have stamina and the cows produce good calves when bred to a beef bull. Some of these cows weighing not over 600 pounds, have given birth to half breed calves which have developed into 500 to pound animals at 12 to 13 months of age. They usually weigh about 800 to 850 pounds at two years of age when raised under average southern farm conditions. The half breed calves do not fatten out as well as calves of a higher grade, but if permitted to grow until two or three years of age they finish out as very good beef animals. The half breed heifers when bred to beef bulls usually produce excellent calves.

No section of the country can raise cattle as cheaply as the south, and the variety and prices of feeds are such that the animals can be economically finished for the market. The forage plants, especially sorghum and corn, make such a luxuriant growth in the southern latitudes that large yields of silage can be produced per acre. The silage is an excellent feed for wintering the breeding herd, or for finishing the animals for the market. The use of silage in a fattening ration almost invariably increases the size of the daily gains, cheapens the gains, lengthens the period during which cattle can be fed cottonseed meal economically and without danger, and results in better finish, fatter cattle, and greater profits per head. The leguminous hays as alfalfa, cowpea, lespedeza, red clover, and vetch, and the corn stover and oat straw are good rough feeds to use in conjunction with silage.

The Shorthorn, Aberdeen-Angus, Hereford, Red Polled and Devon breeds of cattle all do well in the south. The Shorthorn does well on all lands where the pastures are good and feed is plentiful. The cows usually prove to be very good milkers, giving milk enough for the calf and to supply the home as well. The result of the good milking qualities of the cows is usually a good growthy calf. The Herefords and Angus are good grazers and will do well under range conditions, as well as on the small farm. The Hereford stands ahead of all breeds as a range animal, but the Angus have the advantage over all breeds in the feedlot, as they finish out very smoothly, are

high in quality and kill out a high percentage of marketable meat. The Devon is slower of growth than the other breeds, but are great rustlers and fatten on pastures which are so thin that some of the beef breeds could hardly subsist. The Red Polled is a dual purpose breed which ranks next to the milking strain of Shorthorns in the production of milk and beef. They are not as well known, nor as popular as the Shorthorn, but have done well wherever tried in the south. Any of the breeds cross well with the native cattle, and can be used advantageously in breeding up the scrub herds.

By the eradication of the cattle tick, the use of good, purebred beef bulls, the improvement of the pasture lands, and a closer study of the cattle business, the south will develop into a great cattle raising section, and should contribute largely to the supply of meat in the next two decades. In no case should high-priced, high-bred stock be brought from tick free territory until the farm upon which they are to be kept has been rid of ticks.

TO IMPROVE AMERICAN WOOL BY AUSTRALIAN METHOD.

Washington, D. C., March 17.—If American wools were sent to market graded and put up as attractively as are Australian wools, it is estimated that an increase in price of as much as three cents a pound might be received by the grower. Wool growers, dealers, and manufacturers generally admit that the American system (or lack of system) is very bad, and at the annual meeting of the National Wool Growers Association in Salt Lake City, Utah, considerable interest was shown in the proposal to adopt the Australian method of putting up wool. Three cents a pound upon wools selling at from fifteen to thirty cents a pound is very high percentage of loss which can and doubtless will be prevented by growers in the future. The growers' gain in this particular is in no way opposed to the interests of the dealers or manufacturers.

The Bureau of Animal Industry of the United States Department of Agriculture

has prepared a collection of American and Australian wools for use in educational work in this direction. This exhibit includes samples of various grades of wool, showing how grade and value may be determined by factors under the control of the sheep raiser.

Australian and New Zealand wools are graded or "classed" at the time of shearing. They are also shipped in bales instead of sacks. The "wool classers" who do their work at the shearing plant are familiar with the basis of grading wool for manufacturers' uses. No bale contains more than one grade of wool,



Tops, or Combed Wool

removal from the fleece of that part of the wool shorn from the legs and belly. Such and any one bale is a true representative of others of the same grade shorn from the same flock. In many instances the fleece are also "skirted." Skirting is the skirtings contain most of the dirt and foreign matter present in the fleece and when baled and sold separately bring their actual value and do not detract from the appearance and uniform character of the body wool.

Quite frequently the bodies of Australian fleeces are held together by a

roll twisted from the fleece itself and which serves to keep the fleece intact while being placed in the bale and after the bale is opened at the market, thus avoiding possibility of injury from the use of unsuitable twine.

Only a small proportion of American wool growers separate their wool into grades before sacking for shipment. Unless the flock is of very uniform character the sacks of wool must be opened at the warehouse and their contents graded before being offered for sale. Skirting is never done in America and on the majority of ranches the tags or dung locks are left with the fleeces.

The breeding of the sheep is of first importance in determining the grade of the wool. Wool growers, as a rule, are not familiar enough with the commercial grading of wool to understand into which of the grades the fleeces of a particular breed of sheep would be placed. Aside from the matter of grade, the value of wool is controlled to a great extent by the feed supply and methods of herding the sheep on the range. Lessons upon these points as well as upon the handling of the shorn wool can be brought home by the exhibit that has been prepared by the Bureau of Animal Industry. It is not too much to expect that in the next decade improved business practices will add over ten per cent to the returns received for wool by sheep raisers.

PUBLIC LANDS.

About 323,000,000 acres of public land remain unentered in the western range states. Congress seems disposed to enact some legislation that will make a final disposition of this land. What this legislation will be no one can safely predict at this time. However, no matter what form the legislation may ultimately take, it will be some two or three years before it will become effective, so there is no occasion for alarm.

The wools of Kentucky shrink but 37 per cent. They are the lightest of any state in the Union.

A NEW HOMESTEAD PROPOSITION.

In the last issue of the National Wool Grower we published the Kent Land Leasing bill and the Mondell Two Section Homestead bill. We now publish a bill drawn by A. A. Jones, Assistant Secretary of the Interior, which he has recommended be passed. This measure coming with the endorsement of the Department of Interior will naturally receive careful consideration and will probably be passed. We have no doubt that this measure will meet with the approval of the House, but many Senators feel that the 320-acre homestead will furnish sufficient land for a family on which to make a living if a living can be made from any of the lands now remaining vacant. The new bill is to apply to grazing lands or those now used by the sheep and cattle men. Anyone who understands the situation knows that on this grazing land it would be impossible for any family to make a living on one section or for that matter on anything less than ten sections. However, this fact will not prevent thousands of homesteaders from taking up these lands with the intention of forcing stockmen to buy them out. It will mean a serious disturbance of all range conditions and will do no one any particular good for at this time stockmen cannot afford the additional expense incident to the purchase of their range such as would follow the passage of a one-section homestead law. The Jones bill follows:

A Bill to Provide for Stock-raising Homesteads.

Be enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That from and after the passage of this act it shall be lawful for any person qualified to make entry under the homestead laws of the United States to make a stock-raising homestead entry for not exceeding six hundred and forty acres of unappropriated public land in reasonably compact form: **Provided**, however, that

the land so entered shall theretofore have been designated by the Secretary of the Interior as "stock-raising lands."

Sec. 2. That the Secretary of the Interior is hereby authorized on application, or otherwise, to designate as subject to entry under this act lands the surface of which is in his opinion chiefly valuable for grazing, or raising forage crops, and which in his opinion do not contain merchantable timber and are not susceptible of irrigation from any known source of water supply.

Sec. 3. That any qualified homestead entryman may make entry under the homestead laws of lands so designated by the Secretary of the Interior, according to legal subdivisions, in areas not exceeding six hundred and forty acres, and in compact form so far as may be, subject to the provisions of this act, and secure title thereto by compliance with the terms of the homestead laws: **Provided**, That instead of cultivation as required by the homestead laws, the entryman shall be required to make permanent improvements upon the land entered tending to increase the value of the same for stock-raising purposes, of the value of not less than one dollar and twenty-five cents per acre, and at least one-half of such improvements shall be placed upon the land within three years after the date of entry thereof.

Sec. 4. That any homestead entryman of lands of the character herein described, who has not submitted final proof upon his existing entry, shall have the right to enter, subject to the provisions of this act, such an amount of contiguous public lands, designated under this act, as shall not, together with the amount embraced in his original entry, exceed six hundred and forty acres, and residence upon and improvements made on the original entry shall be credited on both entries, but the improvements must equal one dollar and twenty-five cents for each acre within the original and additional entries.

Sec. 5. That persons who have

submitted final proof or acquired title to lands of the character herein described, under the homestead laws and who own and reside upon the land so acquired, may, subject to the provisions of this act, make additional entry for and obtain patent to contiguous public lands designated for entry under the provisions of this act, which, together with the area theretofore acquired under the homestead law, shall not exceed six hundred and forty acres, on proof of expenditure on account of permanent improvements upon the original or additional entry of the required amount reckoned on the area of both entries.

Sec. 6. That any person who is the head of a family, or who has arrived at the age of twenty-one years and is a citizen of the United States who has acquired title to lands of the character herein described by purchase or under agricultural public-land laws other than the homestead law, and who owns and resides upon the lands so acquired, may, subject to the provisions of this act, make additional entry for and obtain patent to contiguous public lands designated for entry under the provisions of this act, which, together with the area theretofore acquired and held, shall not exceed six hundred and forty acres, and obtain patent therefor upon proof of the expenditure on account of permanent improvements upon the land so owned, or the additional entry, of the required amount reckoned on the area of all lands so acquired and held, and upon proof that he has maintained residence upon either the privately owned land or the land embraced within the additional entry for not less than three years from and after the date of the additional entry.

Sec. 7. That any person who is the head of a family or who has arrived at the age of twenty-one years and is a citizen of the United States, who has entered or acquired under the homestead laws, or otherwise, prior to the passage of this act, less than six hundred and forty acres of land and who is unable to exercise the right of additional entry herein conferred because no

vacant lands adjoin the tract so entered or acquired, may, upon submitting proof that he resides upon and has not sold or incumbered the land entered or acquired, reconvey to the United States the land so occupied and entered or acquired, and in lieu thereof enter and acquire title to not exceeding six hundred and forty acres of land designated under this act, but must show compliance with all the provisions of the homestead law and of this act respecting the new entry.

Sec. 8. That the commutation provisions of the homestead laws shall not apply to any entries made under this act.



Paint Brand Still Showing on the Scoured Wool

Sec. 9. That any person who has made entry under the homestead laws, but from any cause has lost, forfeited or abandoned the same shall be entitled to the benefits of this act as though such former entry has not been made and any person applying for a homestead under this act shall furnish a description of his former entry: **Provided**, That the provisions of this section shall not apply to any person whose former entry was canceled for fraud.

Sec. 10. That any homestead entrymen or land owners who shall be entitled to additional entry under this act shall have for ninety days after the designation under this act of lands

contiguous to those entered or owned and occupied by him, the preferential right to make additional entry as provided in this act: **Provided**, That where vacant lands contiguous to the lands of two or more entrymen or land owners entitled to additional entries under this section are not sufficient in amount and area to enable such entrymen to secure by additional entry the maximum amounts to which they are entitled, the Secretary of the Interior is authorized to make an equitable division of the lands applied for hereunder among the several entrymen or land owners, applying to exercise preferential rights, such division to be in tracts of not less than forty acres, and so made as to equalize as nearly as possible the area which such entrymen and land owners will acquire by adding the tracts embraced in additional entries to the lands originally held or owned by them: **Provided**, further, That where but one forty-acre tract of vacant land may adjoin the lands of two or more entrymen or land owners entitled to exercise preferential rights hereunder, the tract in question may be entered by the person who first submits to the local land office his application to exercise said preferential right.

Sec. 11. That all entries made and patents issued under the provision of

this act shall be subject to and contain a reservation to the United States of all the coal and other minerals in the lands so entered and patented, together with the right to prospect for mine, and remove the same. The coal and other mineral deposits in such lands shall be subject to disposal by the United States in accordance with the provisions of the coal and mineral land laws in force at the time of such disposal. Any person qualified to locate and enter the coal or other mineral deposits, or having the right to mine and remove the same under the laws of the United States, shall have the right at

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all times to enter upon the lands entered or patented, as provided by this act, for the purpose of prospecting for coal or other mineral therein, provided he shall not injure, damage, or destroy the permanent improvements of the entryman or patentee, and shall be liable to and compensate the entryman or patentee for all damages to the crops on such lands by recure the payment of such damages to son of such prospecting. Any person who has acquired from the United States the coal or other mineral deposits in any such land or the right to mine and remove the same, may re-enter and occupy so much of the surface thereof as may be required for all purposes reasonably incident to the mining or removal of the coal or other minerals, (1) upon securing the written consent or waiver of the homestead entryman or patentee; (2) upon payment of the damages to crops or other tangible improvements to the owner thereof, where agreement may be had as to the amount thereof; or, (3) in lieu of either of the foregoing provisions, upon the execution of a good and sufficient bond or undertaking to the United States for the use and benefit of the entryman or owner of land, to secure the payment of such damages to the crops or tangible improvements of the entryman or owner, as may be determined and fixed in an action brought upon the bond in a court of competent jurisdiction, against the principal and sureties thereon, such bond to be in form and in accordance with rules and regulations prescribed by the Secretary of the Interior and to be filed with and approved by the register and receiver of the local land office of the district wherein the land is situate, subject to appeal to the Commissioner of the General Land Office: **Provided**, That all patents issued for the coal or other mineral deposits herein reserved shall contain appropriate notations declaring them to be subject to the provisions of this act with reference to the disposition, occupancy, and use of the surface of the land.

Sec. 12. That the Secretary of the Interior is hereby authorized to make

Important!

I want to urge every Western Wool Grower to send us \$5.00 as one year's dues to the National Wool Growers Association. This includes one year's subscription to this paper.

We have on hand work of the most important character that must be carried out, but the funds now available will not permit this. We must have your help at once. \$5.00 is a relatively small matter to each individual wool grower, but with the help of all we can save the industry many thousand dollars.

As a wool grower giving my time to this organization without pay I appeal to you for assistance. Send us \$5.00 as your share to help with the work.

F. J. HAGENBARTH
President National Wool
Growers Association
Salt Lake City
Utah

all necessary rules and regulations in harmony with the provisions and purposes of this act for the purpose of carrying the same into effect.

COST OF WHEAT PRODUCTION.

The state of Saskatchewan in Canada appointed a grain commission to investigate the cost of wheat production in that province last year. This commission recently reported that the cost of producing wheat was 55 cents per bushel on the farm and delivered on board cars it cost the farmer 62 cents per bushel. The report also shows that the average price received for wheat was 66¼ cents per bushel. On this basis it is clear that wheat growing is not profitable on a small scale. What is true of Canada in respect to cost and prices, is true of much of the wheat produced in our own western states. The tendency in all the older wheat-growing sections has been towards larger holdings and more economical production. This is because of the lack of profit when handled on a small scale.

LOWERED CONSUMPTION OF MEAT IN DENMARK.

(Consul General E. D. Winslow, Copenhagen.)

The consumption of meat in this city is declining. During 1909 there were consumed by the inhabitants of larger Copenhagen (including Frederiksberg) some 77,404,240 pounds of meat, or an average of about 143.74 pounds per capita. For the year 1913 these figures declined to about 71,027,550 pounds, or 124.34 pounds per inhabitant.

The consumption of horse meat and veal is larger than formerly, while the use of beef, mutton, and pork is much less and brings down the average. The high price of meat is given as the main cause of the decreased consumption.

Some wonderful Merino wool could be raised on the poorer lands of Kentucky that would sell for 30 cents per grease pound.

COMBING OR CLOTHING WOOL.

All our wool market reports quote prices on clothing wool, combing or staple wool. The words combing and staple refer to the same kind of wool, for a staple wool is one that is long enough to comb. The length, strength and crimp determine whether a wool is a combing wool or a clothing wool, the crimp playing but a minor role in this determination. Combing wools are now worth about 10 per cent more than clothing wools, but at times the difference in value has been greater.

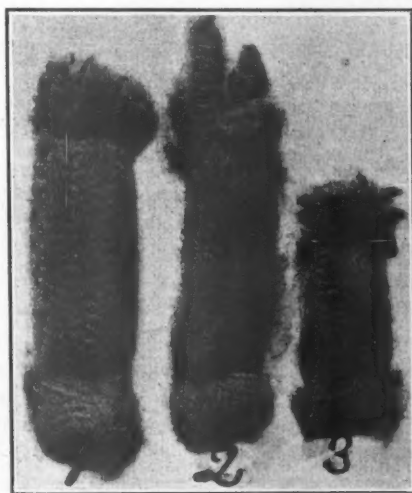
The cut published in connection with this was made from samples prepared by the National Wool Warehouse and Storage Co. Figure 1 shows a combing wool $2\frac{3}{8}$ inches long. Before a wool should be combed it should be two inches long, but wools of slightly lesser length are combed with considerable waste. The shorter the wool is the greater ordinarily will be the percentage of noils or short fibers that it yields in combing. As these noils are worth only about 60 per cent of the value of the scoured wool it naturally follows that as the percentage of them increase the value of the scoured wool from which they are made must decrease. In connection with this, however, we might remark that if some of our mills were equipped with more up-to-date machinery less noils would be produced.

Figure 2 shows a wool $2\frac{1}{2}$ inches long. It has sufficient length to be combed, but it is classed as clothing wool because the fiber is weak. It cannot be combed for it would not stand the strain required of a combing wool. A considerable volume of wool from every country falls into this class as unfavorable seasons affect the strength of all wool fibers. Wool that has a "break" in it regardless of its length becomes a clothing wool. Thus its value is reduced at least 10 per cent, in some cases more, by reason of such break.

Figure 3 shows a short clothing wool about $1\frac{1}{2}$ inches long. It is too short to comb and hence must be lim-

ited in its use to the manufacture of woollens, a cheaper grade of goods usually than worsted that are made always out of combing wools. Therefore clothing wools are of less value than combing wools and unfortunately a sheep that produces clothing wool generally produces less pounds than one that produces combing wools. Thus the producer of clothing wool gets hit from two directions.

Breeding and feeding are the factors that determine whether a sheep will produce combing or clothing wool. The man who is using Merino rams that are covered with a short wool fiber will soon have all his sheep cov-



1—Combing Wool. 2—Clothing Wool of Sufficient Length to Comb, But Too Weak. 3—Clothing Wool.

ered with the same short wool. Such a result will be noticed with great regularity in the offspring of such rams. In almost every band of Merino ewes will be found some with a short staple of wool and unless they are kept culled out the percentage of clothing wool will rapidly increase.

Aside from the question of breeding other factors may intervene to shorten the fiber of the wool. A band of sheep may produce combing wool one year and clothing wool the next year. Any thing that diminishes the food supply or interferes with the health of the sheep tends to diminish its growth. This interference may be only for a few days and then followed by favor-

able conditions, in which case we get a "break" in the wool. However, the flockmaster who is prepared to feed and care for his flocks need have but little fear of any considerable injury to his wool. While something may happen to make a well bred sheep produce a short or weak fiber of wool, nothing ever can happen to make the scrub sheep produce a good fiber of wool.

If a ewe averages seven pounds of wool and this be classed as clothing wool she returns a fleece worth about \$1.14 in Boston, if this wool is combing wool she returns \$1.28. Here is an advantage of 14 cents per sheep but the advantage is greater than this for there would also be an increase in the weight of fleece. On 2,000 ewes this additional 14 cents would amount to \$280.00 each year. Suppose this 14 cents increase in income can be brought about by the use of better rams, and it can be. Forty rams are sufficient for 2,000 ewes. If average rams cost \$12.00 per head, but by using a better ram, your income from wool can be increased \$280 per year, then the saving of one year would enable you to pay \$19.00 per head for rams. This is based on just one year's profit, but the ram would last for five years and the value of the flock would grow greater each year.

FINE IN NORTH-EASTERN WYOMING.

To The National Woolgrower:—

The winter up-to-date has been one of the most favorable ever experienced in this section. There has never been more than two or three inches of snow on the ground and with the exception of one week no extremely cold weather. Sheep are thrifty and in good shape and the wool from this section is likely to be unusually well grown and sound. Except around Sheridan there has been no reason to feed sheep any where along the line of the Burlington railroad this winter. The wool clip here should be about as large as last year.

E. P. SPAETH, Gillette.

FEBRUARY SHEEP MARKET.

March opened somewhat inauspiciously in the sheep market, but the trade is so accustomed to adversity that the slump caused little comment. Sooner or later the tide will turn, but that event is long delayed. The initial market of March eliminated the 8-cent quotation and good heavy lambs had to sell at \$7.50 per cwt. Constant congestion, due to persistent liquidation, is the depressing influence. Feeders have no incentive to put on finish and have embraced every hard spot on which to unload. There is a constant tendency to contract the illogical spread between choice and medium lambs and also to close the gap between sheep and lambs.

All through February there was a free run of live muttons at western markets. Results show that Iowa, Wisconsin and Minnesota absorbed more western stock last fall than they were given credit for. At a period when Iowa was supposed to be bare, it was sending heavy consignments to Chicago and both Minnesota and Wisconsin were at all times well represented. Montana was also a factor contributing whole train loads of hay fed stuff which were not held for a finish at nearby feed lots owing to high cost of that operation. Most of the Colorados cut loose during the month stopped at Missouri River markets. Features of the month were further narrowing of the spread between sheep and lambs, scarcity of fat wethers, a narrow spread between ewes and wethers and an unsatisfactory market for big lambs, most of the Colorado delegation being northern bred. Feeders were at all times on the alert to cut off the board bill and every hard spot swelled receipts. Cold weather was a favorable influence, expanding mutton consumption and had January's unsatisfactory meteorological conditions continued, prices would have ruled considerably lower. During the month sheep and yearlings advanced 25 to 35 cents over January closing prices; ewes gained 50 to 75 cents and bucks \$1.00 to \$1.25, while

the best lambs were a shade lower at the close while other grades were a point higher.

February's lamb top was \$8.10, Mexican yearlings reached \$7.50, wethers, \$6.50, and ewes the same figure. Lambs sold largely at \$7.50 to \$7.90; yearlings, \$6.75 to \$7.25; sheep \$6.00 to \$6.35, and ewes \$5.50 to \$6.00.

February receipts at Chicago were 457,788 or 105,060 more than last year. The figures furnish some explanation of unsatisfactory market conditions. It was a record February run. The six principal western markets received approximately 935,000. Chicago shipments were 140,643 a gain of 47,707 over the same period of 1913. The two-month supply at the six western points, Chicago, Kansas City, Omaha, St. Louis, St. Joseph and Sioux City, was approximately 2,087,000 against 1,800,000 last year, 2,091,000 in 1912, and 1,762,000 in 1911.

Both eastern butchers and feeders were free buyers during the month furnishing local killers with considerable competition, but the latter were able to exercise control of the price, making function much of the time. Every 25-cent bulge furnished feeders with incentive to order cars and the run frequently furnished commission houses with a surprise. At no stage was there any inducement to make standard goods and lambs sold were regarded as well disposed of. Idaho and Montana stuff did not delay en route to market to put on weight because of lack of appreciation of that quality at the market and most of the time the big feeding stations around Chicago were half empty. But for the receptive mood in which eastern feeders were all month, it would have been an even meaner market.

Lambs comprised the great bulk of the February supply and most of the time there was a decided deficiency in sheep the result being a sharp advance in values of fat ewes and heavy bucks. Sheep climbed steadily to higher levels, the common price for the month being \$5.65 against \$5.45 in January, while the month's average on fat lambs was \$7.60 against \$7.70 in

January. The advance in sheep values during January and February was about 60 cents per cwt., while lambs lost about 10 cents during that period narrowing the spread between the two grades about 70 cents per cwt.

Weekly average prices of sheep and lambs follow:

Week Ending—	Sheep	Lambs
January 3	\$5.35	\$7.90
January 10	5.50	7.95
January 17	5.40	7.70
January 24	5.50	7.65
January 31	5.50	7.65
February 17	5.45	7.50
February 14	5.50	7.55
February 21	5.55	7.55
February 28	5.95	7.80

Monthly top prices follow:

	1914	1913	1912	1911	1910
Sheep ..	\$6.30	\$6.50	\$5.10	\$4.75	\$6.60
January ..	6.50	7.00	5.00	4.85	7.85
February ..	8.40	9.50	7.40	6.65	9.10
Lambs ..	8.10	9.25	7.15	6.50	9.40
January ..	8.10	9.25	7.15	6.50	9.40
February ..	8.10	9.25	7.15	6.50	9.40

Monthly average prices follow:

	1914	1913	1912	1911	1910
Sheep ..	\$5.45	\$5.30	\$4.25	\$4.10	\$5.85
January ..	5.65	5.85	4.10	4.15	6.50
February ..	7.70	8.55	6.50	6.20	8.30
Lambs ..	7.60	8.55	6.20	6.05	8.65
January ..	7.60	8.55	6.20	6.05	8.65
February ..	7.60	8.55	6.20	6.05	8.65

While general flesh conditions of the offerings was materially better than during January, the proportion of strictly choice to prime handy lambs was small, yet they did not earn their merited premium. At the month's lowest spot, killers got few lambs of better than cull class under \$7.25 and at that juncture \$7.75 was taking the best. Most of the month packers bought half-fat light to medium lambs at \$7.35@7.65 that looked outrageously high, compared with the choice to handy weights going at \$7.85@48, or to the good to choice heavy and strong weights selling largely at \$7.50@7.75. For the top-notch classes eastern shippers were permitted to set the pace at practically all times, and they not infrequently "creamed the crop."

Trade hit its best stride during the first half of the closing week, when native-fed western and Colorado-fed lambs all reached \$8.10 crossing the 8-cent line for the first time during the month. Within this period killers had access to very few lambs grading above good feeder or cull class

March, 1914.

below \$7.50 and many 63 to 68-pound fed-western lambs considerably shy of finish made \$7.60@7.75, but at the extreme close \$8.00 stopped the best and \$7.50 good, especially if heavy, had claim to pretty decent killing quality.

The month closed with good to best handy lambs steady to 10 cents lower than at close of January, others steady to 15 cents higher. Yearlings and wethers closed largely 25@35 cents higher and ewes 50@75 cents higher, while fat bucks, pulled up by the urgency of demand for a few heavy sheep, closed \$1.00@1.25 higher than at the close of January. Prime heavy native ewes reached \$6.50 toward month-end, equaling the best price paid for choice 133 lb. Colorado-fed wethers. Best fed western wethers, aside from Colorados sold at \$6.40 and fed-western ewes \$6.25. Some fed-western yearling ewes made \$6.90, best fed-western yearling wethers \$7.35, and light Colorado-fed Mexican yearlings touched \$7.50.

Broad demand was shown for feeding lambs, Michigan being the most avid purchaser and this trade held a strong basis. A lot of 48 to 55 lb. Montana feeders went out as high as \$6.75@7.00, and most of the 60 to 70 lb. Montana hay-feds found feeder outlet at \$7.00@7.25, some fleshy Montana shearing lambs reaching \$7.50. There was practically no trade in feeding sheep or yearlings and little chance for any, as killers were paying up to \$4.75@5.00 for thin ewes of merely good cull class, and practically no wethers or yearlings arrived in feeder flesh.

Iowa was mainly responsible for the heavy February run. That state appeared to have jammed western lambs into every nook and cranny and they came from unexpected sources. Wisconsin, Minnesota, Illinois, Indiana and Michigan were also good contributors. Colorado also cut loose freely. A somewhat heavy delegation of Idaho and Montana hay-fed stock contributed to the excess which was of lambs practically all of the time.

J. E. P.

THE NATIONAL WOOL GROWER

MEAT IMPORTS.

The total imports of meat into the United States for the month of December, 1913, was 16,287,882 pounds. Of this amount 15,483,670 pounds was beef and 441,308 pounds was mutton. The balance consisted of pork, bologna and sausage casings.

THE SHEEP MARKET AT NORTH PORTLAND, OREGON.

	1913	1914
Receipts January	17,677	28,228
Receipts February	24,726	23,505
Year to date	42,403	51,733

Gain for year 9,330

Price ranges for January and February, and present market are quoted below:

January Range of Sheep Prices.

Lambs, \$6.00 to \$6.50.
Wethers \$5.00 to \$5.40.
Ewes, \$4.25 to \$4.40.
Yearling, \$4.50 to \$4.75.

February Range.

Lambs, \$6.50 to \$6.75.
Wethers, \$5.50 to \$5.75.
Ewes, \$4.00 to \$4.75.
Yearling, \$5.75 to \$6.00.

Present.

Lambs, \$6.25 to \$6.85.
Wethers, \$5.00 to \$5.75.
Ewes, \$4.00 to \$5.00.
Yearling, \$5.75 to \$6.00.

The wool of the United States brought \$57,500,000 last year. The year before it brought \$76,000,000 and would have done the same last year had it been let alone.

SHEEP PLANT FOR SALE

A large fully equipped Sheep Ranch comprising some two thousand acres first class hay land so located as to control an immense government free range, together with Forest Reserve privilege for ten thousand sheep. Will carry twenty thousand sheep in winter and thirty or more in winter. Will sell complete at reasonable price on liberal terms.

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J. BATEMAN & CO.

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Wool Commission Merchants

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GOSSIP OF THE TRADE.

George Lane, Alberta's cattle king, was in Chicago recently looking over the market prospect and expressed a determination to put in sheep. He said: "Canada is short of sheep and I believe a profitable wool and mutton industry can be established. Calgary is now compelled to go to Montana to get mutton for the local market while we are wasting feed worth millions of dollars annually. We have so much rough feed that we could raise sheep by the hundred thousand with practically no expense." The province of Saskatchewan has decided to encourage the industry by making loans on pure-bred rams and grade ewes equal to 75 per cent of first cost taking a lien on the stock and its increase. Whether or not this system of "spoon feeding" will put the industry on a stable basis remains to be seen, but it is a noteworthy experiment.

Considerable frozen mutton has been consigned by Buenos Ayres to New York recently, the movement having been rendered possible by the recent advance in domestic sheep values. Argentine returns for 1913, however, show a large decrease in mutton exports. During last year only 2,515,859 frozen sheep and lamb carcasses left that port, against 3,584,927 in 1912. Some interest is being taken in how New York trade will take to frozen stuff as shop trade there has practically refused to handle frozen beef.

If accurate data was available Iowa would probably be found to be the principal mutton finishing state of the Union, having actually passed Colorado this season, owing to limited operations in the Arkansas valley consequent on high cost of hay. That Iowa fed over a million head this season is admitted. The stuff began running early and has been maintaining a lively clip. At the end of January the trade was confident that the Hawkeye state had blown its wad, but all through February Chicago receipts from that state were heavy. The trade was deceived in the distribution of the stuff. Much of it went into

the hands of former cattle feeders who had the favorable example of neighbors of the previous year. Owing to high cost of feed most of the regular Iowa operators were skeptical and did not fill up, but thousands of former feeders took on sheep and lambs, and save in rare instances they have made money. As the season advanced corn got cheaper and the entire winter was ideal for making cheap gains. At the period Colorado feeders were trying to keep their stock out of the mud and getting scant gains. Iowa was enjoying ideal weather, stock running in cornfields at minimum expense. Of course it was a bet on the weather and the feeder won out, but continued scarcity of stock cattle means that Iowa will be a heavy purchaser of thin western sheep and lambs next fall, probably to the extent of one and one-half million head.

Wisconsin has had a profitable season. Finishing western ovine stock on canning factory refuse is extremely profitable and the canning industry in that state is becoming one of vast proportions. Pea canning is Wisconsin's specialty and pea vine silage makes an ideal sheep feed. Several big operators are now making contracts for next season's put-up and Wisconsin will be in the market for thin sheep with both feet.

Packers are showing what the trade regards as unreasonable discrimination against heavy lambs. During February a lot of 92 to 95 pounds stuff had to be content with \$7.25 an absurd price compared with 80 pound-stock eligible to \$7.75 on the same market. Killers have been paying \$7.00 to \$7.25 for lambs that were decidedly trashy, while ignoring good Colorados that were handicapped by a little weight. Montana wheat-fed lambs weighing 80 to 85 pounds have sold at \$7.40 to \$7.50 that were decidedly inferior to Colorados appraised at \$7.60 to \$7.65. This policy has aroused considerable criticism as the fallacy of low paper cost was exploded long ago.

How close natives ewes have been marketed was indicated by the mere handful that reached the stockyards in

February. The result was the narrowest gap between sheep and ewes in many years. Scarcity of sheep also caused heavy and light yearlings to sell abnormally close together. The visible supply of fat sheep until Texas stuff begins running is very small.

While 8-cent lamb managed to retain a market footing during February the price was rare and possible only when shipping demand inserted a prop under the market. When packers were in a position to dictate prices they insisted on a \$7.50 to \$7.65 market and bought a lot of good lambs that way. During the month many lambs sold at prices that did not let feeders out whole, although farm-fed stuff made remunerative returns owing to lack of expense.

Fighting tops is still a favorable pastime with packer buyers. This makes low paper cost, but lacks logic. It also discourages feeders. With one breath buyers declaim against inferior quality while in the next they make bids that gives both inferiority and mediocrity what amounts to a premium. It practically amounts to notice to the trade that finish is undersirable and nullifies the lessons sought to be inculcated by the International and other fat stock shows. The present market standard appears to be a half-fat lamb. Light stock lacking finish has sold to better advantage than weight in combination with quality all through the present season. Lamb trade has been "out of joint" right along. Choice cattle are selling at \$9.25 to \$9.75, veals around and above \$11.00, and hogs suited to the fresh meat trade at \$8.70 to \$8.90, and yet good lambs have had to be content with \$7.50 to \$7.75.

Present indications are that the March, April and May markets will be largely dependent on Colorado for a supply. There is very little east of Chicago, and the principal cornbelt states are about pumped out. Last year owing to the high market of February thousands of sheep and lambs were put on feed late, but no incentive of that nature has existed this season. This stuff was responsible

for the low late market of the winter of 1913. At this stage a comparison of top prices during the late winter and spring period of recent years is interesting:

	1913	1912	1911	1910	1909	1908
March ..	\$9.15	\$8.25	\$6.65	\$10.60	\$8.30	\$8.35
April	9.35	10.40	6.60	10.20	8.80	8.00
May . . .	8.85	10.60	7.85	9.40	9.80	7.75
June . . .	8.00	9.25	7.65	9.10	9.90	6.75

In 1913, February developed a good market, but with that exception it has been lower than March for years past, lower than April for six years past, and materially lower than May during that period except in 1913 and 1910.

According to all available reports Wyoming has been having a strenuous winter, but elsewhere in the northwest flocks are coming through in good shape. In Wyoming the feed bill has been heavy especially in the Red Desert section. Early lambing in Idaho, that is March lambing may be unfavorably affected by deep snow and that industry shows a decided disposition to expand.

Traders who have been in Montana recently assert that only the factor of tight money prevents a clamor for sheep. While the industry in a numerical sense has dropped to a low ebb, an opinion is gaining ground that sheep are going to be good property.

Light lamb crops are certain in Colorado and New Mexico owing to bad December weather, whole bands having been lost during that period. Idaho and Washington are reported in excellent condition.

The Scotts Bluff country in northwestern Nebraska is attracting considerable attention in commission circles. This year it will turn out 250,000 fat lambs and the output will be doubled in a short time. The Scotts Bluff country is closer to the Nebraska corn supply than northern Colorado. It raises alfalfa in abundance and has a lower freight rate. The irrigated section around Belle Fourche, S. D., is another coming section.

Montana has been cutting loose hay-fed half-fat lambs by the thousands all winter. Packers have been

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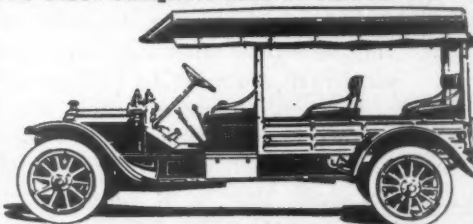
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SALT LAKE CITY, UTAH STONES

taking many of them, but have had to meet keen competition from Michigan, Indiana, and Ohio feeders. Much of this warmed up stuff has been finding the feeder outlet at \$6.85 to \$7.25 weighing 48 to 55 pounds. Montana feeders were unable to get the money to feed out even had they been in that humor and very little stock from that state has been held at feeding stations near Chicago owing to high cost of screenings.

There is considerable difference of opinion as to how much money Colorado feeders must have this year for lambs to pay out. The generally accepted figure is \$8.00 or better. Feeding conditions in Colorado have been bad and three to four weeks feed was lost by the December storm. Beet tops were a loss as just as that crop had been topped, and feed was available, it was covered by snow. Owing to cornbelt competition Colorado feeders have been nursing the market and the run from that quarter will probably be strung out until June. Senator Drake estimates that 75 per cent of northern Colorado feeding was in feeders' hands March 1, which means somewhere between 500,000 and 600,000 lambs then to be marketed from that quarter. This number obviously ought not to be burdensome as the five principal western points have been averaging 230,000 weekly all through the winter and a drop of 20 per cent would speedily create a buying scramble.

"There will be more early lambing in Idaho than ever before," said A. J. Knollin. "In the western part of the state where early lambing is done largely under canvas a late spring will cause some loss. It is mainly a weather proposition and they have had a snug winter in that section. Warm weather from March 1 to 20 will, however, insure a good run of early lambs. There has been considerable complaint of tight money in the northwest, but it is the logical sequence of permanent investment in farm development. Money expended in irrigating and bringing land under cultivation does not come back as does that spent for

cattle and sheep on which the return under normal conditions can be accurately calculated. We must not overlook the fact that a large part of the sheepman's revenue comes from wool, and for several years past that has not been up to standard. After development work has been completed and paid for the country will be in a condition to forge ahead on its own resources.

Wisconsin has been making effort to rid itself of surplus dogs but without success. Frank Kleinheinz, the Badger state sheep expert, has conducted two campaigns in the state legislature, but finds politics a bad proposition to buck. It is the town cur that harrasses the sheep flock and urban representatives take little interest in live stock. Wisconsin ought to maintain at least a million ewes, but as long as the state is overrun with curs, this is impossible.

Another light native lamb crop this year is certain. Interest in mutton making east of the Missouri River, outside Kentucky, Tennessee and Virginia is practically limited to finishing western stock. From all over Michigan, Illinois, Missouri, Wisconsin, Ohio and Indiana, reports come that a mere remnant of native ewes remains and that the 1914 clip of fleece wools will be the smallest in many years. Parasites, dogs and free trade have constituted a potent trinity of repressive influence and even a boom would probably fail to furnish the farmer with incentive to get back into the industry. Theoretically the small farm flock is a good idea, but in practice it fails to work.

R. B. Thomson of the National Wool Warehouse is compiling returns from bankers in the principal wool and mutton producing states of the west, concerning present stocks of sheep. Many of the replies are startling and Mr. Thomson asserts fully warrant the conclusion that the 1913, domestic wool clip was overestimated. To this fact he attributes recent market strength, manufacturers having discovered that there was less wool available than they had supposed. Thom-

March, 1914.

THE NATIONAL WOOL GROWER

45

son expects to have this data compiled within a month, the task involving enormous correspondence, and if figures so far available furnish any criterion a short 1914 domestic clip is inevitable. Southern lamb crop prospects are excellent and supply from that quarter will give packers plenty of material during June and July, when they will need it as there will be little beef at that period.

J. E. P.

John Petrie, live stock agent of the Burlington, figures that 35 per cent of the lambs in northern Colorado feed lots had gone to market by the first week of March. At the same time the Scott's Bluff country was half out and the Arkansas valley in the same condition, while a clean-up had been made in the San Luis valley. This leaves a very moderate supply in sight for March, April and May, and warrants expectancy of a better market. Colorado feeders claim that the estimate of 750,000 going into feed lots there last fall was excessive and many claim that the number back in feeders hands on March 1 did not exceed 450,000.

Kansas City's January and February run was 295,000 or 16,000 less than last year. Omaha's supply during the same period was 445,000, an increase of 46,000 over 1913. Omaha's February run was 219,000 against 192,000 last year, 140,000 in 1912 and 130,000 in 1911.

J. E. P.

LIKES COTTONSEED.

I purchased a car of cottonseed meal early in the winter and have used most of it up. I am very favorably impressed with it for range feeding. I cut out all the weak sheep and gave them about three ounces of cottonseed per day. They immediately began to pick up and have done fine ever since. I expect to use more of this feed next year.

E. O. SELWAY,
Montana.

No scheme has yet been devised by which we can get an accurate report of our domestic wool product.



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THE PARCEL POST will bring the greatest store in all Utah within your reach.

Breeding Ewes for Sale

One band of medium grade, smooth necked breeding ewes, bred to Hampshire rams. Due to lamb May first.

For particulars, call on or address

J. E. MORSE

Dillon, Montana

Romney Sheep

Romney sheep under free trade make fortunes for wool-growers in South America and New Zealand. It is Romney mutton that is coming to our ports. The Romney is the best breed to put on our ranges to cross on the Merino.

Send for literature

JOSEPH WING

Secretary

Mechanicsburg, Ohio

Did you ever ask yourself, "How much does my wool shrink?"

SINGLE DECK RATE.

In neither Washington or Oregon do the railroads grant a 75 per cent rate on shipments of rams nor have they a single deck rate for sheep. In all cases that have been brought before the Interstate Commerce Commission that body has held that sheep in single decks should have a rate about 35 per cent lower than the double deck rate. In Oregon and Washington 85 per cent of the ram shipments are in lots of less than a single deck load. The National Wool Growers Association has therefore submitted a complaint to the railway commission of both Oregon and Washington asking that the railroads of those states be compelled to establish a rate on sheep in single deck loads of 65 per cent of the rate now charged on double decks. We believe we will be able to secure this concession in both states.

SHEEP FOR SALE.

In this issue J. E. Morse of Dillon, Montana, advertises for sale a band of ewes bred to Hampshire rams. From reports that we have bred ewes may be shipped with safety, and it is probable that they will cost much less than yearlings.

ROMNEY SHEEP.

Joseph E. Wing, of Mechanicsburg, Ohio, secretary of the Romney Sheep Breeders Association, writes us that much interest is being taken in the Romney by American sheepmen. He reports that our breeders who have given the Romney a trial have been greatly pleased with them. Mr. Wing will gladly send literature to anyone interested in these sheep.

THANKS TO THE RAILROADS.

During the late storms that prevailed in western Wyoming this winter it was necessary for many sheepmen to have additional feed in short order. We are advised that railroad officials recognized the seriousness of the situa-

tion and used every effort to get grain and any to that section with the least possible delay. It is said that in many instances other freight was laid up in order that feed might be rushed through to the sheepmen.

It is a very great pleasure for us to publish these facts and give the railroad full credit for its consideration.

A BIG SHEEP SHOW.

The National Wool Growers Association is now endeavoring to make arrangements so as to hold a great sheep show and wool exposition in connection with their next annual meeting in Salt Lake City.

Our annual meetings have always been held in January, a month most inopportune for showing sheep on account of the danger from storms. It is now proposed to change the date of the meeting to November. This would insure better weather and would enable all sheep breeders who desire to show at the Chicago International to go to that show immediately at the close of the Salt Lake show.

If it is finally arranged to hold a show at Salt Lake City in November, it will be on a larger scale than ever before attempted.

APPROPRIATION FOR SHEEP.

Some time ago the National Wool Growers Association asked Congress to appropriate \$10,000.00 for the importation of Corriedale sheep from New Zealand. Our advice is that Congress will probably appropriate \$5,000.00 for this purpose. That amount has been included in the Agricultural bill and we are assured that it will pass.

The use of cottonseed cake is going to make a better wool clip in the west. It has a particular effect on producing a long strong staple of wool.

Please forward your dues promptly. Five dollars pays for a full year as well as your subscription to the National Wool Grower.

March, 1914.

WATER RATES ON WOOL.

To the National Wool Grower.

Our current rate from our Pacific Coast loading ports, San Francisco, Portland, Seattle, Tacoma, San Diego and San Pedro, to our discharging pier, Bush Terminals, South Brooklyn, N. Y., are as follows:

Wool in grease, in three-bag bales, 75c per 100 pounds.

Wool in grease, in sacks, 70c per 100 pounds.

Wool in grease, in compressed bales, 45c per 100 pounds.

Wool scoured, in compressed bales, 50c per 100 pounds.

Wool scoured, in sacks, 80c per 100 pounds.

These rates apply to any quantity lots, that is, either carload or less than carload shipments.

Our service is a sailing from our Pacific coast loading ports once every twelve days, and arrivals are accomplished in approximately 21 to 25 days from date of sailing from San Francisco. A schedule card is enclosed you herewith for your further information.

We do not quote a differential rate, or in other words a lower rate to be used in connection with any wool that may come into San Francisco or other ports from Australia. Such shipments will be subject to the regular rates applying via our line, on our domestic wool.

At the present time, nothing definite has been done in regard to the establishment of rates via the Panama canal, nor can we definitely advise you as to just what our service will be.

We, however, anticipate having a very frequent schedule of sailings from our Pacific ports, and will perhaps inaugurate a direct service to Boston and Philadelphia, as well as New York. Such service would therefore save consignees at these outside points the local charges from New York, which they now are obliged to pay.

We have for the past several seasons been handling the bulk of the wool which has moved from the Pa-

THE NATIONAL WOOL GROWER

cific coast to the Atlantic coast by water, and it is our desire to continue to cater to this business in the future, as we have in the past.

AMERICAN HAWAIIAN STEAMSHIP COMPANY.

A LETTER FROM MONTANA.

To The National Wool Grower.

"Did you put me on the mailing list or has my copy got lost. Please look this up and send me the January number as I am very much interested, and am very anxious to get every copy."

GOOD WINTER IN OREGON.

To The National Wool Grower.

Everything is lovely here this winter. We have had no cold weather as yet, and all kinds of stock are in good condition. We will have a good wool crop for it is well grown for this time of year.

J. E. HINTON, Shanniko, Oregon.

SHEEP DOING FINE ON COTTONSEED.

To The National Wool Grower.

"I have just returned from an inspection of our entire outfit of sheep wintering on the Snake river desert west of Idaho Falls. The snow will average 20 inches in depth over the entire country and on the particular days that I was making the inspection the thermometer registered eighteen degrees below zero. I commenced feeding cotton seed meal to these eight bands of sheep on the 5th of December, giving them about one ounce per day to the sheep.

The range at that time was practically bare so far as snow was concerned. My idea was, however, to insure a good breeding season and to keep the sheep from falling off. At the present time the sheep are unable to rustle any feed at all, and I am feeding them three ounces of meal per day and not to exceed one and a half pounds of hay of very indifferent quality. I feel perfectly justified in saying that all of these sheep are in

47

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We live on the spot, and ship direct to our clients, and the commission we charge for buying amounts to less money than the cost of a trip to this side. Horses, cattle and sheep can be bought cheaper through us than by any other method.

We live in the heart of the Romney country and can supply breeding stock of this favorite breed to the best advantage.

Yearling Ewes

We will have for sale about 3000 choice yearling ewes. These are heavy shearing Merinos of unusually good size.

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For Sale HAMPSHIRE RAMS

I have For Sale a number of registered Hampshire yearling, and ram lambs. Breeding and individuality as good as can be had.

A. W. RUCKER
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Mention The National Wool Grower.

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I have for sale registered Duroc Jersey boars and sows of all ages.

Reasonable prices.

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We have 2500 two year old ewes for sale for delivery about April 1st. These ewes are one-half Cotswold and are bred to registered Shropshire bucks to lamb in May.

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HEBER LAND AND LIVE STOCK COMPANY

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Breeders and Sellers of the very best grade of thorough-bred Cotswold Rams, as well as owners of large tracts of spring, summer and winter ranges in Wyoming, well stocked with high grade range sheep.

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THOMAS H. AUSTIN, General Manager

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Buyers and Sellers of all grades of range sheep, mutton and lambs. Breeders of thorough-bred Cotswold rams. Owners of good grade of range ewes. Doing an extensive feeding business in Idaho.

better condition than they were last fall, and they have the best grown fleeces that I have ever seen at this time of the year. I am going to hold them strictly to this ration of hay and meal as long as the snow remains on the ground, at which time I will cut out the hay entirely and possibly diminish the meal a very little. I will be pleased to give your paper the exact conditions regarding loss, lambing percentage and amount of wool grown on these eight bands of sheep as soon as it is possible to do so.

There seems to be some trouble experienced by different sheepmen in the feeding of cottonseed meal. They claim that the strong sheep follow the herder up when he is scattering the meal and get more than their share. I have tried several plans to avoid this. In some cases I have used two men, one to hold the band and the other to scatter the meal. This is not satisfactory on account of having to dog the sheep in order to hold them. The plan I have recently adopted and found the most satisfactory is to have your meal in a little pen, say a quarter of a mile from your feeding grounds, the herder can scatter it from the pen and be out of sight of the herd while he is doing it. After the meal is all scattered then drive the sheep to it, and they will all get an even chance at it."

HUGH C. WOOD,
Spencer, Idaho.

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J. R. ALLEN & BROS.
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The World's greatest flock of Cotswold consisting of 3000 registered breeding ewes of best breeding and highest merit. The best blood imported from England for past twenty years has been added to this flock.

They winter 4000 and summer 10,000 feet above sea level. They are raised on the range under the most favorable conditions known conducive to perfect health. No stomach or lung worms so prevalent in eastern bred sheep. For flock leaders we can furnish rams that cannot be excelled and we think superior to best ram brought to this country from England. **We are offering 1000 Yearling Rams, 1500 Ram Lambs, a few cars of Breeding Ewes and Ewe Lambs.**

Many of the best Hampshires produced in America and England including the leading prize winners have been added to our flock.

Come and see us and these sheep—you are always welcome.

What Is Wool?

WHAT is wool? One who has not specially studied the subject might answer that it was the covering of the sheep. Such an answer would be only half a truth. While some sheep are covered with wool, others are covered with perfect hair, and it is said that no fleece of wool has been produced that did not also contain some hair. There are more hair producing sheep in the world than wool producing ones. Practically all the sheep of Asia produce hair and this is true of the sheep of some other countries. All the sheep of Australia are said to be wool producers and this is true of those in this country except some Indian sheep in the southwest. Then again wool is found on other animals than the sheep. Cashmere goats, some rabbits, the vicuna and some other animals produce wool. It is therefore clear that we must have a better definition of wool than the one here given.

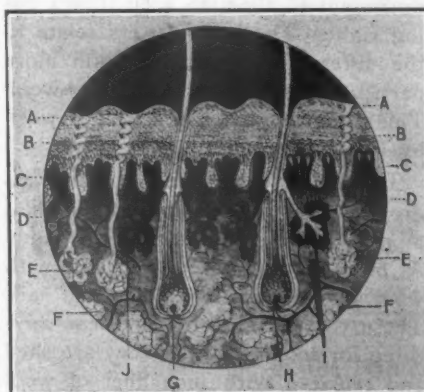
Technically, wool is described as a modified hair. The differences between wool and hair, however, are very great when studied through the microscope or from the standpoint of the uses to which they may be put. The wool fiber is composed of an enormous number of very minute cells without any substance in their center. The hair is constructed of a smaller number of much larger cells seeming to contain marrow in their center. The surface of a wool fiber is covered by thousands of scales that stand out from the stem of the fiber, giving it a rough appearance. A hair is also covered with these scales, but they are decidedly less in number and on account of the different mode of attachment give the fiber a smooth surface. Hairs are ordinarily straight and are never crimped like wool. On account of the great number of tiny cells of which the wool fiber is composed it possesses great elasticity. If the wool fiber be stretched it first lengthens as the crimps straighten out, if further pressure be applied the

fiber itself stretches and grows smaller and smaller in diameter as it elongates. If it is then released without breaking it immediately returns to its former size and shape. But if it has been stretched enough to break it at the point where the break occurs, the ends of the fiber remains straight. Now a hair possesses no elasticity whatever. If it be two inches long it cannot be stretched to a greater length and attempts to do so break the fiber. Where it breaks the ends curl up in a snarl. The reason it won't stretch is because it is less highly organized than wool having a comparatively few cells where wool has millions. These differences between hair and wool un-

ing can be added after the fiber, is once formed this defect must last as long as does the fiber. It can never be repaired. As an illustration of the number of cells in a fiber of fine wool it may be stated as a rule that each one four hundredths of an inch contains about 1,500 separate cells. This accounts for its elasticity for in stretching and twisting the fiber these cells roll over each other and thus prevent breaking. The finer the wool the greater the number of cells and the wider will be the uses to which that wool can be put.

Let us examine the way wool grows. Figure 1 shows a section of skin with two wool fibers growing out of it. It also shows the way the fiber gets its feed and other necessities. Letters at G. & H. show the hair follicles. It is here that the growth of wool starts. In this follicle the fiber first makes its appearance in the form of semi-liquid lymph exuded by the rich layer of blood vessels surrounding this follicle. As the fiber grows, this lymph hardens and forms the cells that go to make the wool as we see it. The hair follicle lies in the fourth layer of the skin down next to the body.

Letters J. & I. show the oil glands that produce the yolks and wool grease. These glands resemble a bunch of grapes and empty their oil directly into the shaft of the wool fiber just a little beneath the surface of the skin. Each fiber is usually supplied with more than one of these oil glands and in the Merino sheep these glands are much more highly developed than in other breeds. Thus we see that the grease found in the fleece is carried upwards with the wool as it grows. When the skin is irritated slightly or when the sheep is doing well, these glands are excreting more oil than at other seasons. Frequently by examining a fleece of wool, more grease will be found at some point along the fiber than at other points. This is because such wool was produced during periods when the



Section of Skin Showing Two Wool Fibers
G and H—The Hair Follicles. E—The Sweat Glands and Tubes.
F—The Fat Cells. J and I—Oil Glands.

fit hair for the manufacture of many fabrics where a strong, flexible, soft, elastic cloth is desired.

Wool in composition is much like the skin from which it grows. In this respect it is like feathers, hoofs, horns, all of which are merely skin growths in another form. The skin itself is composed of four layers of cells and the wool fiber shows the same general construction. The outer layer of cells is flattened, then comes a layer of thin fibrous cells and in the center clusters of larger cells. Anything that interferes with the nutrition of the fiber at once produces a change in its composition at the very base, and as noth-

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THOMAS BLACKBURN

sheep was more thrifty than at other periods. The oil being emptied directly into the channel of the wool fiber it serves to lubricate it and keep it pliable during its growth. It is this oil or fat that forms the yolk of the wool and in Merinos forms about one third of the total weight of the fleece. Letter E shows the sweat glands and the tube leading from them through which the perspiration is given off. This moisture is also discharged into the wool and little of it evaporates after the fleece has been well grown.

Letter F shows the fat cells in the skin where fat is stored up during periods when the sheep is gaining. When they are failing, these cells diminish in size. It will be noted that all of these glands are well supplied with tiny blood vessels which carry the nutriment to them to keep things going right. The other letters relate to the different layers of the skin more particularly than to the growing wool. This illustration is taken from a work by Bowman.

The wool fiber first begins its growth about two and one-half months before the birth of the lamb. At birth the lamb is well covered with wool and sometimes with coarse hair. These coarse hairs do not mean anything for sooner or later they are shed and replaced with such fiber of wool as is justified by the sheeps breeding. No satisfactory reason has ever been given for the appearance of these coarse hairs on the the young lamb unless it be to make the breeders of Merinos think for a short time that a Cotswold buck had been in the flock. We have explained how the wool fiber starts its growth down in the hair follicle from lymph brought there by the blood and how the cells harden and pile layer upon layer thus forcing the fiber upwards and giving it what we call growth. Thus it is seen that the fiber grows from the skin out, no growth ever taking place at the free end of the fiber. As the wool fiber comes through the skin, it develops its curl or crimp as the case may be. What causes this crimp is not satisfactorily explained. Wool

grown in summer is always coarser than wool grown in cold weather. Experts even claim to be able to tell which part of the fiber was grown at each particular season. In the warm months the skin is loose and relaxed and the little pores through which the fiber emerges are larger than in winter. This may be the reason the wool is coarser.

When one looks at the wool fiber with the naked eye it appears to be round, but under the microscope few, if any, fibers are actually round. Mostly they are flattened at some point on their surface. Neither is the fiber the same diameter from one end to the other. Here and there it narrows down only to broaden out again. This is influenced by the feed and climate, and breeding of the sheep. The better bred the greater tendency to uniformity in the fiber.

After seeing how the fiber grows on the rich nutriment brought to it by the blood, all must appreciate that anything that affects this supply will inevitably affect the fiber. Starve the sheep a few days and the fiber grown during that period will be weak and lean. Increase the feed and care and the size and strength of the fiber increases. No wool fiber, however, is stronger than its weakest point so it will be seen that a few days or weeks of neglect has an influence not only upon the value of the fiber grown during that period, but also on all that was grown before or afterwards. Wool grown under rich feed is always coarser than wool grown with moderate feed. In years of scant feed wool has a peculiar fineness known as "hungar" fineness. The Australian clip of 1912 and 1913, was known as such a clip because of the drouth that prevailed during its growth. Good feed up to a certain point materially increases the supply of wool, but it has not been proven that when an animal becomes over fat that this increases the growth of wool.

All parts of the sheep's body does not produce wool of the same fineness. The finest wool comes from a point near the point of the shoulder slight-

ly above and behind the joint formed by the shoulder blade. Why the finest wool comes from the fore part of the sheep we do not know unless it be that in that region the circulation is much better and the blood at such points is better supplied with oxygen. The further back we go on the sheep body the coarser becomes the wool until the britch is reached where on some sheep the wool merges into hair. It is supposed that in very ancient times all sheep were covered with hair, however, beneath this hair was found on some sheep a covering of fine down. By careful selection covering a period of thousands of years this hair has been bred out and wool bred in. Still, there can be no doubt that were the sheep turned loose in a warm country and left to shift for itself it would take less than a century for this fine wool to return to its hairy state. Even in the finest Merinos a few hairs are said to exist, but the better bred the sheep the less of these will be found. Reliable authorities state that on the finest Merinos as many as 60,000 fibers of wool may be found to the square inch. This seems almost incredible until one figures out how many fibers one twenty-five thousandths of an inch in diameter there is room for to the square inch. Then it appears that 60,000 to the inch is very thin. There is still lots of room on the square inch of skin to place six million more fibers. So we have not yet reached the limit of density of fleece.

While wool is a delicate substance it possesses wonderful strength. It has more than twice the strength of the toughest wood, and is as strong as wire rope, size for size. In fact wool is such a wonderful thing that every man who produces it should give it every care for the comfort of the world depends on it. It is only destroyed by fire and chemicals, and there are old wool rugs in existence yet that were made 4,000 years ago. The wool that we are producing today will in some manner be serving the people maybe a thousand years hence.

S. W. M.

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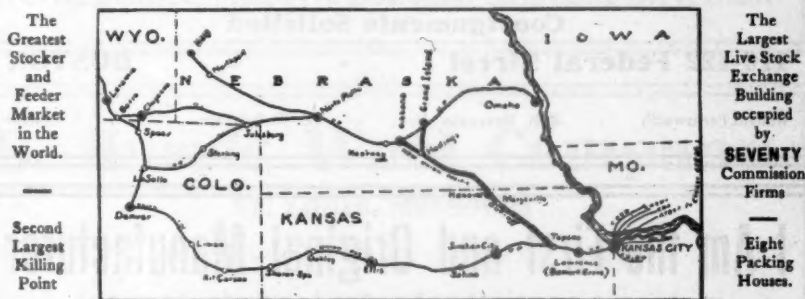
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**GOOD WOOL CROP
 IN EASTERN MONTANA.**

To The National Wool Grower.

We are having a fairly good winter in eastern Montana so far. Had but little snow in December and January, but since February came in it has turned colder. The sheep are all wintering in fine shape and wool looks good.

**HUGH B. DOUGLAS,
 Rosebud County, Montana.**

**CONDITIONS IN
 EASTERN IDAHO.**

To The National Wool Grower.

In the Soda Springs country and around Alexander, Idaho, we have had a fine winter. There has been lots of snow and but little cold weather. All of our sheep are on feed and have been for some time. At the present moment it looks as if we would have one of the best clips we ever had. The wool is long and there seems to be but little dirt in it. Of course there will not be near as much wool as last season, for we have 10 per cent less sheep in this section. A good many here have sold out, and while other sheepmen bought some of the sheep, many went to market. Most of the sheep here run on the National Forests, and when a man sells out the fellow who buys is cut 20 per cent on the number he can put on the same allotment. This itself would reduce the number left in this section. I think there is 10 per cent less sheep in eastern Idaho than a year ago.

**IDAHO RANCH CO.,
 Alexander, Idaho.**

**CONDITIONS IN
 WESTERN WYOMING.**

To The National Wool Grower.

That area of the winter range lying between Rawlins and Opal, Wyoming, is carrying the heaviest blanket of snow known since the winter of 1889-90, but the sheepmen having improved in their methods of handling sheep on the range, in step with the

general betterment of conditions in the western country, have protected their flocks by giving them an abundance of feed since the fall of the first snow of consequence. Beginning carefully with cotton seed meal cake and corn and following right up with baled hay, most of the sheep have been cared for as well as those kept at home and wintered on the ranches. In a few instances some hardship was encountered in getting the herds into the railroad, but once in reach of the railroad ample feed was secured and the damage to the sheep was not material. There has probably been more feed consumed by sheep in this area this winter than in all of the past twenty years, which shows conclusively that the old time range men who used to say it was cheaper to let them starve than to feed them, have been succeeded by a class of stockmen who take a broader view both from a humane and economical standpoint. The sheep are strong and the owners are prepared to continue the feeding until all danger is passed. The range feed is the best for years and with such complete protection by the deep snow, an abundance of good range feed is assured as soon as winter breaks. The snows came early and in a solid blanket. There has hardly been a wind this winter that could raise a dust, consequently fleeces are bound to be unusually clean and with few exceptions of better staple than usual. So far losses have been nominal, but as practically all owners reduced the size of their outfits last fall, there will be considerably less wool sheared this spring than last.

J. D. NOBLITT,
Cokeville.

Editors Note—As some alarming stories had been sent out relative to the conditions in western Wyoming, we are glad to publish this statement from a man who is on the ground and knows conditions. The above report agrees with reports from that section that we have had from other sources.

Have you sent in a new subscriber for the National Wool Grower?

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**A DANGEROUS PROPOSAL.**

The following is a true copy of the Initiative Bill which is to go before the people of California at the general election, this fall:

The people of the state of California do enact, or otherwise, as follows:

Hours of Labor.

"Any employer who shall require or permit, or who shall suffer or permit any overseer, superintendent, foreman, or other agent of such employer, to require or permit any person in his employ to work more than eight hours in one day, or more than forty-eight hours in one week, except in case of extraordinary emergency caused by fire, flood, or danger to life or property, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than \$50 nor more than \$500 or imprisoned in the county jail not less than 10 nor more than 90 days, or both so fined and imprisoned."

Never before have the wool growers of California had to face as serious problem as faces them in the proposed eight hour law. This proposal is to be voted on this fall and it will undoubtedly carry in the cities, of which California has some large ones. This vote will be sufficient to overcome the light vote ordinarily registered in rural districts. Should this proposal become a law it means that the herder could not take his sheep out before eight in the morning and he would have to be back in camp by four in the afternoon. This of course would mean that two herders would have to be employed where one now does the work. At lambing time double the force would be required. This labor cost would be so tremendous that no sheepmen could survive. This is the first instance where an attempt has been made to pass an eight-hour law affecting all the labor within a state and is the first instance of an effort to apply such a law to agricultural occupations. Sheep herding, camp tending, in fact all the labor connected with the sheep industry, with the exception of shearing, could not pro-

perly be classed as labor at all. Four-fifths of the time when the shepherd is employed is spent resting on some rock or under the shade of some tree. There is no manual or mental labor connected with it at all, and to place such employees on an eight-hour basis would be more than ridiculous.

The officers of the California Wool Growers' Association are alive to the possibility of this proposal becoming a law and they are already taking steps to secure its defeat. Every sheepman in California who wants to stay in the sheep business should get in touch with F. A. Ellenwood of Red Bluff, who is secretary of the California Association and assist him in doing everything to secure the defeat of this pernicious proposal. This matter should not be put off for it will require the united efforts of all to save the day. The National Wool Growers' Association will do all it can to assist the sheepmen of California in this fight, for if an eight-hour day can be adopted there, it will be attempted in other states.

A LETTER FROM COLORADO.

To The National Wool Grower.

"Enclosed please find \$2.00 to be placed to my credit on subscription to the National Wool Grower. You are printing the best sheep paper on earth."

BRANDING SHEEP.

To The National Wool Grower.

In response to your inquiry as to whether Kemps' Branding Fluid was satisfactory or not, I am pleased to advise you that it has given satisfaction with us i.e. it seems to stay on as well as the insoluble paints that we previously used, and being prepared, it is certainly a time saver. My best judgment is that it cost about the same as the insoluble mixtures.

We usually brand twice a year, that is to say, we replace dim brands in the fall, and after using Kemps' this season I believe, we had less dim brands than usual.

BAGGS LIVESTOCK CO.,

Baggs, Wyoming.

THE FASCINATION OF WOOL.

To the National Wool Grower.

In writing for readers of a journal like the National Wool Grower, who are chiefly interested in the prices which they can obtain for their wool, it may appear to be somewhat out of place to begin to discuss such a question as is named above. We think, however, that some real importance attaches to it, because any means which may increase the interest of the wool grower in his own product, should also tend to increase the care and attention he bestows upon it, and ultimately bring about the one object which he has in view, that is, the maintenance or it may be the improvement of its market value. In handling wool, even a casual observer will see that it presents certain features which though in one sense trifling, demand some attention. These features are all the more interesting because of the importance of their slight variations, and the subtle distinctions of thought and description which they involve.

If we begin with such a simple point as that of length, we shall see that out of this it is possible to draw some thoughts which should be of actual value to the producer himself, quite apart from the bald idea that the longer the fleece the heavier it weighs and the more it is worth. Length in the fibre gives firmness to any material into which it may be manufactured, and just as long wool produces a draping effect on the sheep carrying it, so that same wool helps to produce a similar effect in the finished product much better than short wool. It will be seen then that two important features are given to the manufactured product in consequence of the material being of good length. That is a strength and firmness which cannot otherwise be imparted, and a draping effect which greatly enhances its attractiveness. There is also another characteristic of long wool which helps very considerably to decide the purposes for which it is most suitable. We refer to its lustre. As a general rule wools of good length are lustrous, that is, they

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have a peculiar capacity for reflecting the light which falls upon them. This again produces an effect which is of considerable importance to the manufacturer. In the first place a considerable difference is made in the results produced by dyeing lustrous cloths. Experiments conducted for practical comparative purposes have been made with wools of varying degrees of lustre after they have been manufactured, and some interesting results have been attained. It is impossible to dye lustrous cloths as deep shades as those cloths which are non-lustrous. A certain shallowness is produced which is not present when there is no lustre in the manufactured fibres. The peculiar quality of the material for throwing off the light which falls upon it also has the effect of preventing even the deepest dyes from showing up to the best advantage.

Have you ordered
your paper twine?
Seventy five per cent
of western wool will
be tied with paper
this year.

When length and fineness can be combined in the same fleece the grower has attained a very valuable object, having done something which greatly enhances the value of the wool. When these two characteristics are combined the manufacturing properties of the wool are greatly increased, giving to it a better market value in the eyes of those who know its true worth. What is known as a 40's quality Colonial top in this country is not worth as much money as a 46's pick hog, and the difference in price is greater than the difference in the quality. There are only a few counts between the 40's Colonial top and the 46's English pick hog, but there is a difference of 3d or 4d per pound in the price, and this is brought about by the fact that the 46's

pick hog is not only of better quality than the 40's, but is also of much greater length. The reader will see from this that there is a considerable degree of fascination in the raw material which he produces, and that this fascination has behind it a considerable commercial value if it is used aright. A difference of 4d per pound in the top means also a considerable difference in the value of the raw material, and so long as there is an open market for long wool of good quality, it behooves the grower to rise to his opportunities.

S. B. HOLLINGS, England.

A LETTER FROM NEBRASKA.

To The National Wool Grower.

"I have before me your January issue of the Wool Grower and wish to congratulate you upon the attractiveness of the same. It strikes me that this is of such calibre that every one in any way connected with the sheep industry cannot help but be benefited in some way by the articles published. It is entitled to the support of the sheepmen fraternity at large."

EXPERIMENT STATIONS GETTING IN LINE.

The Agricultural Experiment Station of Kentucky has just recently established a wool exhibit consisting of the various grades of domestic wool and some samples of manufactures of wool for the use of the students. Brown & Adams of Boston furnished the wool samples and the Cleveland Worsted Mills the samples of wool manufactures. This is a fine move on the part of the experiment station and every state agricultural college should follow suit. These institutions have not given the sheep industry the attention it was entitled to, and if we are behind the times, they are more to blame than the sheepmen.

Salt Lake City is the natural heart of the range sheep industry. It is the proper location for a great sheep paper.

EARLY OREGON LAMBS.

To The National Wool Grower.

"I have for sale 1,450 fine large two-year-old ewes bred to Lincoln bucks so as to lamb the middle of April. Weather has been fine here so far this winter. We have about eight inches of snow, but stock is fat and doing well. Quite a lot of ewes here will begin lambing about February 15th."

W. E. BONER,
Joseph, Oregon.

**WANTS POSITION ON
SHEEP RANCH.**

To The National Wool Grower.

"I am a married man, 38 years old, just my wife and myself, and we are anxious to get a position in the northwest. I have had experience raising sheep in Kansas, and I like the business. If anyone can use a sober, industrious man, and his wife, I would like them to write me. I can furnish the best of reference.

W. H. WATERHOUSE,
304 N. Market St., Benton, Ark.

CONDITIONS IN NEW MEXICO.

To The National Wool Grower.

As near as I can find out there will be between five and eight per cent less wool sheared in northern New Mexico than last year. In the southern part of the state it will run from 10 to 15 per cent short. The wools in the northern part of the state will be about as usual while those in the southern part are going to be far above the average, due to a good winter.

There has been a good deal of feeding done in this part of the state, for this country, however, much more should have been done as a great many growers report losses of from 10 to 25 per cent.

The ranges at the present time are good all over the state, though we do not look for a large lamb crop. This being due to snow and bad weather during breeding season.

J. P. VAN HOUTEN,
Shoemaker, New Mexico.

LIVE STOCK GROWERS' ATTENTION

The Utah Packing & Provision Co., is in the market all the time for cattle, sheep and hogs. Call us up by long distance, or wire for prices.

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This Association annually publishes the increase of the flocks, keeping the lineage by name and number of every animal so recorded.

S. M. CLEAVER, Secretary,
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CONDITIONS IN COLORADO.

To The National Wool Grower.

The heavy fall of snow which fell the first part of December has necessitated feeding much corn, so, sheep are generally strong and the wool well grown and much cleaner than usual. We have had no wind and dust since last shearing time.

I estimate the loss of sheep over the state, and New Mexico also, to be from 15 to 20 per cent. A great deal of this loss was caused by the sheep being drifted under the snow and smothered.

The storm coming during the mating season will cut the lamb crop very short. Many large flocks were not mated at all. I believe that Colorado and New Mexico will not have to exceed 40 per cent of the usual lamb crop.

There is every indication that we will have plenty of early grass.

L. E. THOMPSON,
Las Animas, Colo.

A LETTER FROM ILLINOIS.

To The National Wool Grower.

"Permit me to congratulate you upon the splendid issues of the National Wool Grower during the past year. I am enclosing \$1.00 to cover the cost of subscription for another year."

FREE COURSE IN SHEEP INDUSTRY.

The College of Agriculture at Berkeley, California, has issued circular 113, telling of the many free correspondent courses open to the people of California. Among others is a course in sheep husbandry. Anyone desiring to take this course should address the college for the necessary blanks and particulars.

The average weight of fleece in Kentucky is but 4.6 pounds, yet each fleece yields 2.9 pounds of scoured wool. The average weight of fleece in Washington is 9.1 pounds, but the weight of clean wool is only 2.73 pounds.

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